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ABSTRACT

These content standards for Delaware public schools specify standards of student expectation for the individual subject areas included in the provision of vocational education and outline equal educational opportunity guidelines. The first part of the volume consists of cross-referenced listings of behavioral objectives and standards of student expectation for each of the following areas: agribusiness and agricultural production; allied health occupations; business and office education; consumer, personal, and miscellaneous services (including cosmetology); industrial arts; marketing and distribution; prevocational and cooperative education; trade and industrial education; and vocational home economics. Explained in the second part of the guide are equal educational opportunity guidelines pertaining to human relations and sex equity compliance standards as well as special education. (MN)

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CONTENT STANDARDS
FOR DELAWARE
PUBLIC SCHOOLS

STATE BOARD OF EDUCATION
DOVER, DELAWARE

DE8513301

Vocational Education

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DELAWARE DEPARTMENT OF PUBLIC INSTRUCTION **WILLIAM B. KEENE – STATE SUPERINTENDENT**

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FOREWORD

The State Board of Education directed The Department to prepare program and compliance standards for equal educational opportunity in all required and various elective subject areas. The state instructional supervisors have been actively involved in drafting the standards and guidelines through advisory committee meetings and workshops with representatives from all school districts.

During the summer workshops many elementary and secondary teachers participated. As a result of their work and the work of others, the standards and guidelines were field tested during the 1984-85 school year. Teachers and administrators were asked to recommend any improvements or changes for inclusion in the final draft for State Board approval in 1985 for implementation in 1986. This effort provided each school the opportunity to review its existing curricula to determine if the standards were being addressed, in accordance with the equal educational opportunity guidelines, in both the provision of instruction and the expectancy of student performance.

The standards are intended primarily to serve as a base for curricula, however, individual teachers can use the standards to review their grade level(s) and/or course(s) for clarity and appropriateness.

Using the data obtained from the various reviews, the Department prepared final drafts of the program standards for approval by the State Board at its December, 1985 meeting. Full implementation of the standards will occur in September, 1986.

The review and improvement process for these standards will be an ongoing activity with input and recomendations from local advisory committees, teachers, administrators and Department personnel

William B Keene
William B. Keene
State Superintendent

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Content Standards

LIBERTY AND INDEPENDENCE

WILLIAM B. KEENE, State Superintendent

THE DELAWARE DEPARTMENT OF PUBLIC INSTRUCTION

ACKNOWLEDGEMENTS

These program standards were developed with the assistance of the following representatives of local school districts:

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Agricultural Occupations

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CONTENT [illegible]ANDARDS
FOR
AGRICULTURAL OCCUPATIONS
01.0101 Agriculture, Business & Management, General
Level 1

01.0101 Agriculture, Business & Management, General an instructional program that generally prepares individuals to apply the economic and business principles involved in the organization, operation, and management of farm and agricultural businesses.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Orientation to the supervised occupational experience program.	1.1 Describe the purpose of a supervised occupational experience program. a. Determining the value. b. Establishing the requirements, agreements, etc. c. Determining the content of the program. d. Planning the individual program. e. Operate an individual supervised occupational experience program.
	1.2 Describe the supervised occupational experience program. a. Identify factors influencing desirable relationships between student, employer, teacher, and parent. b. Identify importance and qualities of a pleasing personality. c. Identify opportunties that the occupational experience program offers to improve one's personality.

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d. Identify responsibilities of students to insure proper working relations with the school, employer, and parent.

1.3 Describe how to apply and interview for a job.

a. Employment techniques.
Making applications.
   (1) Letter-contents, form, length, etc.
   (2) Preparing application form.
   (3) Telephone.
   (4) Resume.

b. Personal interview.
   (1) Personal appearance.
   (2) Mannerisms.
   (3) Communicating with employer.
   (4) Evaluate resume.

c. Follow-up of interview.

2. Career opportunities in agricultural occupations.

2.1 Locate and identify the opportunities for employment in agricultural occupations.

2.2 Determine and catalog all of the off-farm agricultural businesses which service the community and area. Classify under the following occupational areas:

a. Agricultural machinery.

b. Agricultural supplies and equipment.

c. Livestock and poultry.

- d. Crops, forestry, and soil conservation.
- e. Ornamental horticulture.
- f. Recreation and Wildlife.
- g. Agricultural Services.
- h. Agricultural processing and marketing.
- i. Others.

2.3 Appraise the employment situation, including number employed, probable turnover, and security in agricultural business in the community and area.

2.4 Identify from the Department of Labor data, industrial surveys, bank surveys, Department of Agriculture data, and other sources for job opportunities in agricultural businesses outside the local community.

3. Studying the training station business and the specific occupations in Agricultural business.

3.1 Identify the various businesses and classify their employees under the following occupational activities and specific job titles such as managerial, professional, technical, clerical, sales, and service.

4. Understanding the requirements for employment and advancement in agricultural business occupations.	4.1	Identify educational requirements.
	4.2	Identify occupational experience.
	4.3	State physical strength, dexterity, and abilities requried.
	4.4	Identify personal traits and characteristics required.
5. Identifying the products and services handled by area agricultural business.	5.1	Determine and list the products and services handled by local agricultural businesses such as livestock, fertilizers, agricultural chemicals, equipment, farm structures, etc.
	5.2	Determine the services provided by various agricultural related businesses such as insurance, finance, communication, research, distribution and transportation, etc.
6. Identifying occupations which best meet the individual student's abilities and skills.	6.1	Determine personal attributes needed by employees, such as honesty, loyalty, and cooperation.
	6.2	Contact local employment security commission office and arrange to have General Aptitude Test Battery administered.
	6.3	Consult with guidance counselor.

7. Understanding complex problems of human relations found in a business identifying the problems, analyzing situations, and formulating possible solutions.	7.1	Determine factors that affect an employee's ability to get along with his supervisor and fellow employees - consider factors such as temperament, persistence, personality, age, tenure, education, etc.
	7.2	Determine what the employer expects of his employees and what the employee expects of his employer. Consider characteristics such as loyalty, respect for authority, willingness to learn, cooperation, honesty, responsibility, leadership, and morale.
8. Vocational student organization membership.	8.1	Identify the advantages of participating in Vocational student organizations.
	8.2	Participate as a member of a Vocational student organization.
9. Development of leadership skills through VSO and related activities.	9.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
AGRICULTURAL OCCUPATIONS
01.0104 Farm and Ranch Management
Level I

01.0104 Farm and Ranch Management -- an instructional program that prepares individuals to manage a farm or ranch. Includes instruction in farm enterprise analysis, accounting, taxes, production, financing, capital resources, purchasing, government programs, farm inputs, performance records, contracts, estate planning, and marketing.

Program Objective		Standard of Student Expectation
The program will provide instruction in:		The student will be expected to:
1. Organization and functions of farm and ranch management.	1.1	Identify a variety of materials and services needed in a modern agricultural society.
	1.2	Identify supplies information about agricultural products and techniques.
	1.3	Describe how they support schools, community, state, and nation through taxes and other indirect employee payment of taxes.
2. Functions of an agricultural business.	2.1	Identify functions of exchange.
	2.2	Describe functions of physical supply.
	2.3	Identify facilitating functions.
3. Keeping records.	3.1	Identify the importance of record keeping.
	3.2	List different types of record keeping systems.
	3.3	Analyze the occupation in which placed by listing the activities or jobs he is expected to perform.

4. Understanding the different types of agricultural businesses.

4.1 Describe individual proprietorship.

- a. Characteristics.
- b. Advantages.
- c. Disadvantages.

4.2 Describe the partnership.

- a. Characteristics.
- b. Advantages.
- c. Disadvantages.

4.3 Describe general purpose corporation.

- a. Characteristics.
- b. Advantages.
- c. Disadvantages.

4.4 Describe the cooperative corportion.

- a. Characteristics.
- b. Advantages.
- c. Disadvantages.

5. Understanding the organizational patterns of agricultural businesses.	5.1 Identify line or military pattern.
	5.2 Identify functional pattern.
	5.3 Identify line and staff pattern.
6. Introduction to Principles of Marketing.	6.1 Describe the marketing process from the producer to the consumer.
	6.2 Distinguish government grades and standards.
	6.3 Describe handling, transporting, and storing agricultural products.
7. Applying the economic principles in analyzing the farm business.	7.1 Describe and apply production function. a. Diminishing returns. b. Project maximizing point.
	7.2 Describe and apply opportunity cost.
	7.3 Describe and apply cost analysis.
	7.4 Describe and apply input combination.
	7.5 Describe and apply enterprise selection.
	7.6 Describe and apply supply and demand.
	7.7 Describe and apply analysis of records.
	7.8 Describe and apply budgeting.

	7.9	Describe and apply cash flow analysis.
	7.10	Describe and apply marketing techniques.
	7.11	Describe and apply basic tax management.
	7.12	Describe how to acquire capital.
	7.13	Understand basic agriculture law.
8. Introduction to personal relations.	8.1	Complete a job application.
	8.2	Evaluate job application.
	8.3	List different methods of employee evaluation.
9. Vocational student organization membership.	9.1	Identify the advantages of participating in Vocational student organizations.
	9.2	Participate as a member of a Vocational student organization.
10. Development of leadership skills through VSO and related activities.	10.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

11. Orientation to the supervised occupational experience program.

11.1 Describe the purpose of a supervised occupational experience program.

a. Determining the value.

b. Establishing the requirements, agreements, etc.

c. Determining the content of the program.

d. Planning the individual program.

e. Operate an individual supervised occupational experience program.

CONTENT STANDARDS
FOR
AGRICULTURAL OCCUPATIONS
01.0204 Agriculture Power Machinery

01.0204 Agriculture Power Machinery -- an instructional program that prepares individuals to select, operate, service, maintain, and repair a variety of agricultural power units and agricultural machinery and equipment. Includes instruction in gas, diesel, and electric units; welding; refrigeration; and hydraulics and other power systems.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Agricultural power and machinery safety.	1.1 Identify safety rules and regulations.
	1.2 Describe state eye protection regulations.
	1.3 Identify tools and demonstrate their safe use.
	1.4 Demonstrate proper use of the fire extinguisher.
	1.5 Demonstrate proper maintenance of tools.
	1.6 Demonstrate safe work habits.
2. Selecting agricultural machinery.	2.1 Describe the history of agricultural machinery.
	2.2 Determine quality of agricultural machinery.
	2.3 Compare life of agricultural machinery.
	2.4 State factors in selecting agriculture machinery.
	2.5 Describe cooperative purchase of agriculture machinery.

3. Basic Mechanics.	3.1	**Describe the history of engines.**
	3.2	**Compare fuels and principles of combustion.**
	3.3	**Describe engine operating principles.**
	3.4	**Identify engine parts and their function.**
	3.5	**Perform maintenance and replacement of needed parts.**
	3.6	**Demonstrate troubeshooting skills.**
4. Using and maintaining agricultural machinery.	4.1	**State care and maintenance of machinery.**
	4.2	**Describe preventive maintenance.**
	4.3	**Demonstrate operation of farm machinery.**
	4.4	**Perform repair of farm machinery.**
	4.5	**Identify machinery parts.**
	4.6	**Set up a parts department.**
	4.7	**Perform maintenance and replacement of broken parts.**
	4.8	**Perform assembly and adjustment of machinery.**
	4.9	**Paint machinery.**

5. Proper care of Farm Machinery.	5.1 Select and perform the proper care of: a. row planter. b. grain drill. c. plows. d. harrows. e. disks. f. cultivators. g. mowers. h. forage harvester. i. balers. j. combiners. k. corn pickers and shellers. l. sprayers. m. spreaders. n. milking equipment.
6. Arc welding.	6.1 Identify metals. 6.2 Handle metals in welding. 6.3 Perform arc welding.

6.4 Select arc welding equipment.

6.5 Operate the arc welder.

6.6 Perform the following tasks:

- a. butt welding.
- b. fillet welding.
- c. vertical, horizontal welding.
- d. welding cast iron.
- e. special arc welding repair techniques.
- f. cutting steel and cast iron with the arc welder.
- g. hard surfacing.

7. Oxyacetylene welding and cutting.

7.1 Identify oxyacelytene welding equipment.

7.2 Operate oxyacelytene welding and cutting equipment.

7.3 Perform fusion welding.

7.4 Perform bronze welding.

7.5 Perform cutting operation.

8. Vocational student organization membership.

8.1 Identify the advantages of participating in Vocational student organizations.

		8.2	Participate as a member of a Vocational student organization.
9.	Development of leadership skills through VSO and related activities.	9.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.
10.	Orientation to the supervised occupational experience program.	10.1	Describe the purpose of a supervised occupational experience program. a. Determining the value. b. Establishing the requirements, agreements, etc. c. Determining the content of the program. d. Planning the individual program. e. Operate an individual supervised occupational experience program.

CONTENT STANDARDS
FOR
AGRICULTURAL OCCUPATIONS
01.0301 Agriculture Production, General
Level I

01.0301 Agriculture Production, General -- an instructional program that generally prepares individuals in planning and economically using facilities, land, water, machinery, chemicals, finance, and labor in the production of plant and animal products.

Program Objective		Standard of Student Expectation
The program will provide instruction in:		The student will be expected to:
1. Locating livestock and poultry careers in agriculture.	1.1	Identify careers in animal production.
2. Getting acquainted with farm animals.	2.1	Identify animal breeds and describe their characteristics.
	2.2	Identify fowl breeds and describe their characteristics.
3. Improving herds and flocks.	3.1	Describe cross breeding.
	3.2	Describe upgrade breeding.
	3.3	Describe line breeding.
	3.4	Describe hybrid effect.
	3.5	Describe judging or selection ideal animals or fowl.
	3.6	Select and grade livestock according to standards set forth by the National FFA livestock, dairy and poultry contests.

4. Feeding livestock.	4.1	List the parts and functions of digestive systems: a. animal. b. fowl.
5. Animal metabolism and growth, cell division.	5.1	Identify nutrients and their functions.
	5.2	Describe miosis.
	5.3	Describe mitosis.
	5.4	Identify development of a simple ration-nutritive ratios.
6. Healthy herds and flocks - care and management of an animal.	6.1	Identify and describe how to control animal diseases and parasites.
	6.2	Describe the function of the respiratory system.
7. Profitable livestock feeding nutrition.	7.1	Identify composition and classification of feeds.
	7.2	Identify digestion in ruminants and simple stomach animals.
	7.3	Describe measuring the value of feeds.

8. Profitable pork production.	8.1	Describe the pork production industry.
	8.2	Identify selection of feeding and breeding stock.
	8.3	Identify feeding and management of the breeding herd.
	8.4	Identify feeding and management of market hogs.
	8.5	Identify disease and parasite control.
	8.6	Recognize the qualities that make swine good for marketing and/or exhibition.
	8.7	Explain terms common to the swine industry.
	8.8	Identify wholesale and retail cuts of meat.
9. Profitable beef production.	9.1	Describe the beef production industry.
	9.2	Identify the selection of breeding and feeding stock.
	9.3	Identify the feeding and management of the breeding herd.
	9.4	Identify feeding and management of stockers and fattening cattle.
	9.5	Identify buying and selling beef cattle.

9.6 Define terms common to the beef cattle industry such as ruminant, steer, heifer, bull, cow, corssbred heifer, open heifer, calving, castrating, dehorning, weaning and branding.

9.7 Name the various parts of beef cattle.

9.8 Explain the purpose of four kinds of production operations, commercial cow-calf, purebred, finishing, and raising weaner calves to yearling feeders.

9.9 Identify the qualities that make a beef animal good for exhibition.

9.10 Identify wholesale and retail cuts of meat.

10. Establishing a profitable dairy herd.

10.1 Identify dairy production idustry.

10.2 Describe selection of breeding stock.

10.3 Describe feeding and mangement of the producing herd.

10.4 Describe feeding and management of young dairy stock.

10.5 Describe marketing dairy products.

10.6 Select and judge dairy stock according to standards set forth by the National Future Farmers of America Dairy Products Contest.

	10.7	Select and judge dairy products according to standards set forth by the National Future Farmers of America Dairy Products Contest.
	10.8	Describe a dairy cow's annual calving cycle.
	10.9	Describe the qualities that make a dairy animal good for exhibition.
11. Efficient sheep production.	11.1	Describe the sheep production industry.
	11.2	Identify selection of breeding and feeding stock.
	11.3	Describe feeding and management of the breeding flock.
	11.4	Describe feeding lambs.
	11.5	Describe control of diseases and parasites.
	11.6	Describe marketing sheep and wool.
	11.7	Explain lambing.
	11.8	Describe how to protect the sheep flock.
	11.9	Recognize the qualities that make a sheep good for exhibition.
	11.10	Explain terms common to the sheep industry.
12. Efficient poultry production.	12.1	Describe the poultry production industry.
	12.2	Select chicks and birds for production.

	12.3	Describe feeding and management of young chickens.
	12.4	Describe turkey production and management.
	12.5	Identify control of diseases and parasites.
13. Nursery operation careers.	13.1	Identify careers in nursery science.
	13.2	Describe how plants affect our lives.
	13.3	Identify parts of the seed and its secret.
	13.4	Define power of germination, osmosis, plasmolysis, transpiration, photsynthesis, and respiration.
	13.5	Describe plant structure and its operation.
	13.6	Define plant growth and its importance.
	13.7	Describe assimilation of foods by plants.
14. Classification of crop plants.	14.1	Write botancial classifications.
	14.2	Describe use of botanical classifications.
	14.3	List classification based on life habit.
	14.4	State agricultural classification.
	14.5	Identify materials fromthe National Future Farmers of America landscaping contest.

	14.6	Select materials according to standards set forth from the National Future Farmers of America Landscaping Contest.
	14.7	Identify terms and symbols common to the landscaping industry.
15. Determining factors affecting area where crops are grown.	15.1	Describe climate and weather.
	15.2	Identify physical conditions which determine crop production.
	15.3	Identify agricultural commodity production areas.
	15.4	List factors determining choice of crops.
16. Developing crop sequences or rotation.	16.1	State the meaning of rotation.
	16.2	Describe the advantage of a rotation.
	16.3	Identify rotation classification.
	16.4	Identify crop residues.
	16.5	Compare barnyard manures and fertilizers.
17. Effective tillage procedures.	17.1	Compare the purpose of cultivation.
	17.2	List new techniques in tillage.

18. Selecting methods for crop improvement.	18.1	Compare types of reproduction.
	18.2	Define reproduction process of the cell in heredity.
	18.3	Describe genetics applied to plant breeding.
	18.4	State methods of improvement.
19. Selecting good seed or plant material.	19.1	Define plant propagation.
	19.2	Develop a farm or suburban garden based on selection of the proper seed or plant material.
	19.3	Identify diseases and insects of plants as they relate to resistent varieties.
20. What is soil.	20.1	Define its origin.
	20.2	Identify soil groups, profile and characteristics.
21. Selecting elements essential to plant growth.	21.1	Describe air, water, carbon dioxide, oxygen.
	21.2	Identify essential major and minor soil elements.

22. Controlling soil reaction.	22.1	Identify acidity and alkalinity.
		(1) Ionization of molecules.
		(2) pH scale.
	22.2	Describe formation of acid and alkaline soils.
	22.3	Describe soil reaction and plant growth.
	22.4	Perform soil testing.
23. Controlling land drainage.	23.1	List forms of drainage.
	23.2	Design a drainage system.
	23.3	Describe maintenance of drainage system.
24. Providing irrigation needs and practices.	24.1	List types of irrigation systems.
	24.2	Plan and operate an irrigation system.
	24.4	Describe maintenance of irrigation system.
25. Understanding our national soil and water conservation programs.	25.1	Describe geological division.
	25.2	Describe man-made erosion.
	25.3	Describe erosion in the United States.
	25.4	Describe our national conservation program.

26. Controlling soil and water conservation.	26.1	Describe the use of wasteland.
	26.2	Identify types of tree farming.
	26.3	Identify types of terrace construction.
	26.4	Identify types of strip cropping.
	26.5	Design farm ponds and dams.
27. Orientation to the supervised occupational experience program.	27.1	Describe the purpose of a supervised occupational experience program. a. Determining the value. b. Establishing the requirements, agreements, etc. c. Determining the content of the program. d. Planning the individual program. e. Operate an individual supervised occupational experience program.

CONTENT STANDARDS
FOR
AGRICULTURAL OCCUPATIONS
01.0302 Animal Production
Level I

01.0302 Animal Production -- an instructional program that prepares individuals to operate animal production enterprises by developing competencies concerning the selection, breeding, physiology, nutrition, health, housing, feeding, and marketing of animals such as dairy cattle, beef cattle, horses, swine, sheep, poultry, bees, rabbits, cats, dogs, and earthworms.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Safety.	1.1 Explain and demonstrate safe handling of livestock and other agricultural animals.
	1.2 Demonstrate safe handling of animal equipment.
	1.3 Develop and demonstrate a safe work attitude.
2. Locating livestock and poultry careers in agriculture.	2.1 Identify careers in animal production.
	2.2 Identify careers in beef production and related areas.
	2.3 Identify careers associated with the dairy industry.
	2.4 Identify careers associated with the swine industry.
	2.5 Identify careers associated with the sheep industry.
	2.6 Identify careers associated with the poultry industry.

3. Getting acquainted with farm animals.	3.1	Identify animal breeds and describe their characteristics.
	3.2	Identify fowl breeds and describe their characteristics.
4. Improving herds and flocks.	4.1	Describe cross breeding.
	4.2	Describe upgrade breeding.
	4.3	Describe line breeding.
	4.4	Describe hybrid effect.
	4.5	Describe judging or selecting ideal animals or fowl.
	4.6	Select and grade livestock according to standards set forth by the National Future Farmers of America Livestock contest.
5. Feeding Livestock.	5.1	List the parts and function of digestive systems: a. animal. b. fowl.
6. Animal metabolism and growth, cell division.	6.1	Identify nutrients and describe their functions.

	6.2	Describe miosis.
	6.3	Describe mitosis.
	6.4	Identify development of a simple ration - nutritive ratios.
	6.5	Identify and discuss the role of water in metabolism.
7. Healthy herds and flocks - care and management of an animal.	7.1	Identify and describe how to control animal diseases and parasites.
	7.2	Describe the function of the respiratory system and circulatory system.
	7.3	Identify common characteristics of a healthy animal.
8. Profitable livestock feeding nutrition.	8.1	Identify composition and classification of feeds.
	8.2	Identify digestion in ruminants and simple stomach animals.
	8.3	Identify measuring the value of feeds.

9. Profitable pork production.	9.1	Identify the importance of the pork industry.
	9.2	Identify selection of feeding and breeding stock.
	9.3	Identify feeding and management of the breeding herd.
	9.4	Identify feeding and management of market hogs.
	9.5	Identify disease and parasite control.
	9.6	Identify marketing, buying and selling hogs.
	9.7	Name the various parts and recognize ideal conformation in swine.
	9.8	Explain terms common to the swine industry.
	9.9.	Identify wholesale and retail cuts of meat.
	9.10	List and describe the steps in gestation of swine.
	9.11	Describe fitting of swine for exhibition.
10. Profitable beef production.	10.1	Identify the beef production industry.
	10.2	Identify the selection of breeding and feeding stock.
	10.3	Identify the feeding and management of the breeding herd.

10.4 Identify feeding and management of stockers and fattening cattle.

10.5 Identify marketing, buying and selling beef cattle.

10.6 Define terms common to the beef cattle industry.

10.7 Name the parts of beef cattle and recognize ideal conformation.

10.8 Explain the purpose of four kinds of production operations: commercial cow-calf, purebred, finishing, and raising weaner calves to yearling feeders.

10.9 Identify wholesale and retail cuts of beef.

10.10 list and describe the steps in gestation of beef cattle.

10.11 Describe fitting of beef for exhibition.

11. Establishing a profitable dairy herd.

11.1 Identify dairy production industry, including products made from milk.

11.2 Describe selection of breeding stock.

11.3 Select and judge dairy stock according to standards set forth by the National Future Farmers of America Dairy Contest.

11.4 Describe feeding and management of the producing herd.

11.5 Describe feeding and management of young dairy stock.

11.6 Describe marketing dairy products.

11.7 Select and judge dairy products according to standards set forth by the National Future Farmers of America Dairy Products Contest.

11.8 Describe a dairy cow's annual calving cycle.

11.9 Name the parts of dairy animals and recognize ideal conformation.

11.10 Explain terms common to the dairy industry.

11.11 Identify marketing, buying and selling of dairy cattle.

11.12 Describe fitting of dairy cattle for exhibition.

12. Efficient sheep production.

12.1 Describe the sheep production industry.

12.2 Identify selection of breeding and feeding stock, including identifying major breeds.

12.3 Describe feeding and management of the breeding flock.

12.4 List and describe the steps in gestation of sheep.

12.5 Describe feed management of lambs and replacement stock.

	12.6	Describe control of diseases and parasites.
	12.7	Describe marketing sheep and wool.
	12.8	Describe how to protect the sheep flock.
	12.9	Name the parts of sheep and recognize ideal conformation.
	12.10	Explain terms common to the sheep industry.
	12.11	Describe fitting of sheep for exhibition.
13. Efficient poultry production.	13.1	Describe the poultry production industry.
	13.2	Name the parts of poultry and recognize ideal conformation.
	13.3	Describe feeding and management of young chickens.
	13.4	Describe turkey production and management.
	13.5	Identify control of diseases and parasites.
	13.6	Identify and select birds and eggs according to standards set forth by the National Future Farmers of America poultry contest.
	13.7	Describe the steps in egg formation, incubation, and hatching.

14. Horses.	14.1	Identify and describe the horse and related industry.
	14.2	Identify the selection and breeding of horses.
	14.3	Define terms in the horse industry.
	14.4	Name the parts and recognize ideal conformation in equine.
	14.5	Identify feeding and management of horses.
	14.6	Discuss and describe grooming, training, and breaking horses.
	14.7	Describe gestation and foaling in horses.
	14.8	Describe identification and control of diseases and parasites in horses.
	14.9	Select and judge horses according to standards set forth by National FFA horse contest.
15. Small animals.	15.1	Discuss opportunities and responsibilities in raising, rearing, showing, and marketing: a. rabbits. b. laboratory animals. c. dogs. d. cats. e. fish.

		f. wildlife.
		g. birds.
		h. and others.
16. Vocational student organization membership.	16.1	Identify the advantages of participating in Vocational student organizations.
	16.2	Participate as a member of a Vocational student organization.
17. Development of leadership skills through VSO and related activities.	17.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.
18. Orientation to the supervised occupational experience program.	18.1	Describe the purpose of a supervised occupational experience program. a. Determining the value. b. Establishing the requirements, agreements, etc. c. Determining the content of the program. d. Planning the individual program. e. Operate an individual supervised occupational experience program.

CONTENT STANDARDS FOR AGRICULTURAL OCCUPATIONS

01.0304 Crop Production

Level I

01.0304 Crop Production -- an instructional program that prepares individuals to operate enterprises concerned with the production of cereal grain, fiber, forage, oilseed, tree fruits and nuts, small fruits, vegetables, and other crops. Includes instruction in soils, plant nutrition, plant and seed identification, genetics, physiology, entomology, plant pathology, plant disease, and pest control, including insecticides, fungicides, herbicides, nonchemical controls, and plant genetic resistance.

Program Objective		Standard of Student Expectation
The program will provide instruction in:		The student will be expected to:
1. Agronomic Crop careers.	1.1	Select careers in crop science.
	1.2	Describe how plants affect our lives.
2. Classification of crop plants.	2.1	List botanical classification.
	2.2	Use botanical classification.
	2.3	List classification based on life habit.
	2.4	State agricultural classification.
3. Determining factors affecting area where crops are grown.	3.1	Identify climate and weather.
	3.2	Describe physical conditions which determine crop production.
	3.3	Identify agricultural commodity production areas.
	3.4	List factors determining choices of crops.

4. Developing crop sequences or rotation.	4.1	State the meaning and advantages of rotation.
	4.2	Identify rotation classifications.
	4.3	Identify effects of crop residues.
5. Effective tillage procedures.	5.1	Compare the purpose of cultivation.
	5.2	List new techniques and equipment used for tillage.
	5.3	Compare conventional vs no-till.
6. Selecting methods for crop improvement.	6.1	Compare types of reproduction.
	6.2	Define reproduction process of the cell in heredity.
	6.3	State genetics applied to plant breeding.
	6.4	State methods of improvement.
7. Selecting good seed or plant material.	7.1	Define plant propagation.
	7.2	Develop a fram or suburban garden.
	7.3	Identify diseases and insects of plants and seeds.
	7.4	Define and describe the importance of certified seed.
	7.5	Identify parts of the seed and its secrets.

	7.6	Define power of germination, osmosis, plasmolysis, transpiration, photsynthesis and respiration.
	7.7	Describe plant structures and their operation.
8. What is soil.	8.1	Explain the origin of soil.
	8.2	Identify soil groups, profile and characteristics.
9. Selecting elements essential to plant growth.	9.1	Describe the importance of air, water, carbon dioxide, oxygen and hydrogen in plant growth.
	9.2	Identify essential major and minor soil elements.
	9.3	Define plant growth and its importance.
	9.4	State assimilation of foods by plants.
	9.5	Compare barnyard manures and fertilizers.
10. Controlling soil reaction.	10.1	Identify acidity and alkalinity. a. ionization of molecules. b. pH scale.
	10.2	Describe formation of acid and alkaline soils.
	10.3	Describe soil reaction and plant growth.
	10.4	Perform soil testing.

11. Controlling land drainage.	11.1	List forms of drainage.
	11.2	Design a drainage system.
	11.3	Describe maintenance of drainage system.
12. Providing irrigation needs and practices.	12.1	List types of irrigation systems.
	12.2	Plan and operate an irrigation system.
	12.3	Describe maintenance of irrigation system.
13. Understanding our national soil and water conservation.	13.1	Describe geological division.
	13.2	Describe man-made erosion.
	13.3	Describe erosion in the United States.
	13.4	Describe our national conservation program.
14. Controlling soil and water conservation and management on the farm.	14.1	Describe use of wasteland.
	14.2	Identify types of tree farming.
	14.3	Identify types of terrace construction.
	14.4	Identify types of strip cropping.
	14.5	Describe the use of farm ponds and dams.

15. School land operations.	15.1	Utilize land for growing crops.
	15.2	Demonstrate crop growing.
16. Vocational student organization membership.	16.1	Identify the advantages of participating in Vocational student organizations.
	16.2	Participate as a member of a Vocational student organization.
17. Development of leadership skills through VSO and related activities.	17.1	Demonstrate leadership development in:
		a. Social and interpersonal skills.
		b. Oral and written communication.
		c. Organization and management skills.
		d. Civic responsibilities.
		e. Parliamentary procedures.
18. Orientation to the supervised occupational experience program.	18.1	Describe the purpose of a supervised occupational experience program.
		a. Determining the value.
		b. Establishing the requirements, agreements, etc.
		c. Determining the content of the program.
		d. Planning the individual program.
		e. Operate an individual supervised occupational experience program.

CONTENT STANDARDS
FOR
AGRICULTURAL OCCUPATIONS
01.0601 Horticulture, General
Level I

01.0601 Horticulture, General -- an instructional program that generally prepares individuals to produce, process, and market plants, shrubs, and trees used principally for ornamental, recreational, and aesthetic purposes and to establish, maintain, and manage horticultural enterprises such as arboriculture, floriculture, greenhouse operation and management, landscaping, nursery operation and management, and turf management. Includes instruction in lmachinery and equipment necessary for each horticultural enterprise.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Occupational opportunities in horticulture and related jobs.	1.1 Identify career opportunities in horticulture.
	1.2 Describe and perform jobs related to horticulture.
2. Identification of horticulture plants.	2.1 Identify plants commonly grown in the area.
3. Propagation of horticulture plants.	3.1 Describe types of propagation.
	3.2 Compare types of reproduction.
	3.3 Define reproduction process of the cell in heredity.
	3.4 State genetics applied to plant breeding.
	3.5 State methods of improvement.
4. Selecting good seed and plant material.	4.1 Define plant propagation.

	4.2	Develop a farm or suburban garden based on selection of good seed and plant material.
	4.3	Identify diseases and insects of plants.
	4.4	Define and describe the importance of certified seed.
5. Plant science.	5.1	Select careers in plant science.
	5.2	Describe how plants affect our lives.
	5.3	Identify parts of the seed and its secrets.
	5.4	Define power of germination, osmosis, plasmolysis, transpiration, photosynthesis, respiration.
	5.5	Identify plant structures and their operation.
	5.6	Describe plant growth and its importance.
	5.7	Describe assimilation of food by plants.
6. Use of soil and other plant media effectively.	6.1	Explain the origin of soil.
	6.2	Identify soil profile.
	6.3	Identify soil characteristics.
	6.4	State soil groups.
7. Recognizing and controlling plant pests and diseases.	7.1	Pass the exam for pesticide certification.

		7.2	Describe the proper use of pesticide material according to national guideline.
8.	Identifying, using, and maintaining plant growing structures.	8.1	Describe climate and weather.
		8.2	Describe physical conditions which determine crop production.
		8.3	Identify agricultural commodity production areas.
		8.4	List factors determining choice of crops.
9.	How to operate, repair, and maintain small power equipment used in care of greenhouses.	9.1	Describe history of engines.
		9.2	Describe engine operating principles.
		9.3	Describe identification and function of engines.
		9.4	State fundamentals of machines.
		9.5	Describe fuels and principles of combustion.
		9.6	Identify fuel systems.
		9.7	Identify electrical accessories.
		9.8	Identify lubricating oils and greases.
		9.9	Demonstrate safe tractor operations.

10. Identifying occupational opportunities as a floral shop operator and/or manager.	10.1 Identify opportunities in running a floral shop.
	10.2 Describe and perform the duties of a floral shop operator.
	10.3 Describe and perform the basic duties of a floral shop manager.
11. Identifying fluoriculture plants.	11.1 Identify plants commonly used in the floral industry.
	11.2 Identify line flowers, massing flowers, from flowers, and filler flowers.
12. Basic floral design.	12.1 Name and define the basic principles of floral design, balance, focal point, scale, rhythm, harmony and unity.
	12.2 Identify basic floral design shapes, circular, triangle, horizontal, crescent, and hogarth curve.
	12.3 Draw and label the color wheel.
	12.4 Describe and perform the basic functions in making a basic floral design.
	12.5 Describe and perform the basic function in making a basic corsage.
	12.6 Identify and define terms common to the floral industry.

	12.7	Identify materials listed in the National FFA contest book for the National Fluoriculture contest.
13. Vocational student organization membership.	13.1	Identify the advantages of participating in Vocational student organizations.
	13.2	Participate as a member of a Vocational student organization.
14. Development of leadership skills through VSO and related activities.	14.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.
15. Orientation to the supervised occupational experience program.	15.1	Describe the purpose of a supervised occupational experience program. a. Determining the value. b. Establishing the requirements, agreements, etc. c. Determining the content of the program. d. Planning the individual program. e. Operate an individual supervised occupational experience program.

CONTENT STANDARDS
FOR
AGRICULTURAL OCCUPATIONS
01.0604 Greenhouse Operation & Management
Level I

01.0604 Greenhouse Operation & Management -- an instructional program that prepares individuals to produce plants under glass and in other artificial environments.

Program Objective		Standard of Student Expectation
The program will provide instruction in:		The student will be expected to:
1. Occupational opportunities as a greenhouse operator and/or greenhouse manager.	1.1	Identify opportunities in running a greenhouse.
	1.2	Describe and perform the duties of a greenhouse operator.
	1.3	Describe and perform the basic duties of a greenhouse manager.
2. Identificationof horticulture plants.	2.1	Identify plants commonly grown in the area for sale.
3. Propagation of horticulture plants.	3.1	Describe types of propagation.
	3.2	Compate types of reproduction.
	3.3	Define reproduction process of the cell in heredity.
	3.4	State genetics applied to plant breeding.
	3.5	State methods of improvement.

4. Selecting good seed and plant material.	4.1	Define plant propagation.
	4.2	Develop a farm or suburban garden based on selection of good seed and plant material.
	4.3	Identify diseases and insects of plants.
	4.4	Define and describe the importance of certified seed.
5. Plant science.	5.1	Select careers in plant science.
	5.2	Describe how plants affect our lives.
	5.3	Identify parts of the seed and its secret.
	5.4	Define power of germination, osmosis, plasmolysis, transpiration, photosynthesis, respiration.
	5.5	Identify plant structures and their operation.
	5.6	Describe plant growth and its importance.
	5.7	Describe assimilation of food by plants.
6. Use of soil and other plant media effectively.	6.1	Explain the origin of soil.
	6.2	Identify soil profile.
	6.3	Identify soil characteristics.
	6.4	State soil groups.

7.	Controlling plants pests and diseases.	7.1	Pass the exam for pesticide certification.
		7.2	Describe the proper use of pesticide material according to national guidelines.
8.	Identifying, using and maintaining plant growing structures.	8.1	Identify climate and weather.
		8.2	Describe physical conditions which determine crop production.
		8.3	Identify agricultural commodity production areas.
		8.4	List factors determining choice of crops.
9.	How to operate, repair, and maintain small power equipment used in care of greenhouses.	9.1	Describe history of engines.
		9.2	Describe engine operating principles.
		9.3	Describe identification and function of engines.
		9.4	State fundamentals of machines.
		9.5	Describe fuels and principles of combustion.
		9.6	Identify fuel systems.
		9.7	Identify electrical accessories.
		9.8	Identify lubricating oils and greases.
		9.9	Demonstrate safe tractor operation.

10. Identifying occupational opportunities as a floral shop operator and/or manager.	10.1	Identify opportunities in running a floral shop.
	10.2	Describe and perform the basic duties of a floral shop operator.
	10.3	Describe and perform the basic duties of a floral shop manager.
11. Identify floriculture plants.	11.1	Identify plants commonly used in the floral industry.
	11.2	Identify line flowers, massing flowers, form flowers, and filler flowers.
12. Basic floral design.	12.1	Define and name the basic principles of floral design, balance, focal point, scale, rhythm, harmony, and unity.
	12.2	Identify basic floral design shapes, circular, triangle, horizontal, crescent, and hogarth curve.
	12.3	Draw and label the color wheel.
	12.4	Describe and perform the basic functions in making a basic floral design.
	12.5	Describe and perform the basic function in making a basic corsage.
	12.6	Identify and define terms common to the floral industry.

	12.7	Identify materials listed in the National FFA contest book, for the National floriculture contest.
13. Vocational student organization membership.	13.1	Identify the advantages of participating in Vocational student organizations.
	13.2	Participate as a member of a Vocational student organization.
14. Development of leadership skills through VSO and related activities.	14.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.
15. Orientation to the supervised occupational experience program.	15.1	Describe the purpose of a supervised occupational experience program. a. Determining the value. b. Establishing the requirements, agreements, etc. c. Determining the content of the program. d. Planning the individual program. e. Operate an individual supervised occupational experience program.

CONTENT STANDARDS
FOR
AGRICULTURAL OCCUPATIONS
01.0606 Nursery Operation and Management
Level I

01.0606 Nursery Operation and Management -- an instruction program that prepares individuals to produce turf, plants, shrubs, and/or trees for the purpose of transplaning or propagating them.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Nursery operation careers.	1.1 Identify careers in nursery science.
	1.2 Describe how plants affect our lives.
	1.3 Identify parts of the seed and its secrets.
	1.4 Define power of germination, osmosis, plasmolysis, transpiration, photosynthesis, and respiration.
	1.5 Define plant structures and their operations.
	1.6 Define plant growth and its importance.
	1.7 Describe assimilation of foods by plants.
	1.8 Describe skills needed in nursery management.
2. Classification of crop plants.	2.1 Write botanical classification.
	2.2 Distinguish use of botanical classification.
	2.3 List classification based on life habit.
	2.4 State agricultural classification.

		2.5	Identify terms and symbols common to the landscaping industry.
		2.6	Identify materials from the National FFA landscaping contest.
		2.7	Select materials according to standards set forth from the National FFA landscaping contest.
3.	Determining factors affecting area where crops are grown.	3.1	Describe climate and weather.
		3.2	Identify physical conditions which determine crop production.
		3.3	Identify agricultural commodity production areas.
		3.4	List factors determining choice of crops.
4.	Developing crop sequences or rotation.	4.1	State the meaning of rotation.
		4.2	Describe the advantage of a rotation.
		4.3	Identify rotation classified.
		4.4	Identify crop residues.
		4.5	Compare barnyard manures and fertilizers.
5.	Effective tillage procedures.	5.1	Compare the purpose of cultivation.
		5.2	List new techniques in tillage.

6. Selecting methods for crop improvement.	6.1	Compare types of reproduction.
	6.2	Define reproduction process of the cell in heredity.
	6.3	State genetics applied to plant breeding.
	6.4	State methods of improvement.
7. Selecting good seed or plant material.	7.1	Define plant propagation.
	7.2	Develop a farm or suburban garden based on selection of the proper seed or plant material.
	7.3	Identify diseases and insects of plants as they relate to resistent varieties.
8. What is soil?	8.1	Define its origin.
	8.2	Identify soil profile.
	8.3	Identify soil characteristics.
	8.4	Identify soil groups.
9. Selecting elements essential to plant growth.	9.1	Describe air, water, carbon dioxide, oxygen and hydrogen.
	9.2	Identify essential major soil elements.
	9.3	Identify essential minor soil elements.

10. Controlling soil reaction.	10.1	Identify acidity and alkalinity. (1) ionization of molecules. (2) pH scale.
	10.2	Describe formation of acid and alkaline soils.
	10.3	Describe soil reaction and plant growth.
	10.4	Perform soil testing.
11. Controlling land drainage.	11.1	List forms of drainage.
	11.2	Design a drainage system.
	11.3	Describe maintenance of drainage system.
12. Providing irrigation needs and practices.	12.1	List types of irrigation system.
	12.2	Plan an irrigation system.
	12.3	Operate the irrigation system.
	12.4	Describe maintenance of irrigation system.
13. Understanding our national soil and water conservation programs.	13.1	Describe geological division.
	13.2	Describe man-made erosion.
	13.3	Describe erosion in the United States.
	13.4	Describe our national conservation program.

14. Controlling soil and water conservation and management on the farm.	14.1	Describe use of wasteland.
	14.2	Identify types of tree farming.
	14.3	Identify types of terrace construction.
	14.4	Identify types of strip cropping.
	14.5	Distinguish farm ponds and dams.
15. Vocational student organization membership.	15.1	Identify the advantages of participating in Vocational student organizations.
	15.2	Participate as a member of a Vocational student organization.
14. Development of leadership skills through VSO and related activities.	14.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.
15. Orientation to the supervised occupational experience program.	15.1	Describe the purpose of a supervised occupational experience program. a. Determining the value. b. Establishing the requirements, agreements, etc.

c. Determining the content of the program.

d. Planning the individual program.

e. Operate an individual supervised occupational experience program.

Agribusiness and Agricultural Production

Allied Health
(Health Occupations)
Content Standards

WILLIAM B. KEENE, State Superintendent

THE DELAWARE DEPARTMENT OF PUBLIC INSTRUCTION

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CONTENT STANDARDS
FOR
ALLIED HEALTH
17.0101 Dental Assisting
Level I, II, III

17.0101 **Dental Assisting -- an instructional program that prepares individuals to assist a dentist at the chairside in a dental operation, to perform reception functions, clerical functions, and selected dental laboratory procedures.**

Program Objective	Standard of Student Expectation
The program will provide instruction in:	**The student will be expected to:**
Dental Occupations.	
1. Introduction to the Dental occupations field.	1.1 **Identify and define dental auxiliary occupations, duties, requirements, job availability and career ladder opportunities.**
	1.2 **Describe the development of dentistry and its many branches.**
	1.3 **Practice safety according to standards set by OSHA.**
	1.4 **Demonstrate appropriate interpersonal relationships with dentist, auxiliaries, patients and others.**
	1.5 **Identify and practice the ethical and legal standards to be utilized throughout their career according to the standards set by the A.D.A.**

1.6 Describe responsibilities of dental assistant and the dentist, dental assistant and the patient, and dental assistant and other health team members.

1.7 Demonstrate knowledge of basic, introductory level dental terms necessary in any dental auxiliary field.

1.8 Demonstrate professional hygiene and grooming requirements and meet standards set by the profession.

Preventive Dentistry

1. Procedures and practices in preventive dentistry.

1.1 Record the dentist's findings of occulusal problems that contribute to poor dental health.

1.2 Identify agents, applications, effects, advantages and disadvantages of disclosing agents and contents.

1.3 Demonstrate methods for encouraging patient to become self-motivated by demonstrating good oral hygiene techniques and explaining the reasons for and effects of good dental care.

1.4 Develop a nutritional diet for a one-week period.

		1.5	Demonstrate knowledge of the role of carbohydrates, dietary counseling, cariogenic and noncariogenic foods.
		1.6	Identify methods of ingesting fluorides and transmission of fluoride to the teeth through the body's system.
		1.7	Identify topical fluoride solutions and demonstrate proper techniques for application.
		1.8	Demonstrate the most common techniques of prevention for large groups of children, young people and adults (volunteer segment of program).
2.	Dental/medical emergencies.	2.1	Complete the practice workbook and film sessions as specified by the Multi-media systems of the American Red Cross.
		2.2	Demonstrate cardiopulmonary resuscitation on a mannequin.
		2.3	Demonstrate a CPR on a mannequin.
		2.4	Identify causes, symptoms and treatment for syncope and demonstrate the auxiliary's role in immediate patient care.
		2.5	Identify symptoms and treatment for epileptic seizures.
		2.6	Identify causes, symptoms and treatment of anaphylactic shock.

	2.7	Demonstrate techniques for taking and recording an accurate blood pressure.
	2.8	Demonstrate techniques for taking and recording temperature, pulse and respiration.
	2.9	Identify and demonstrate the use of each item in the dental office emergency kit.
	2.10	Locate and demonstrate use, care and maintenance of oxygen equipment.
3. Radiography procedures.	3.1	Demonstrate basic knowledge of the discovery and development of dental radiography.
	3.2	Describe the physical properties of x-radiation and its relationship to other forms of radiation found in the universe.
	3.3	Demonstrate knowledge in the use, care and maintenance of the x-ray machine.
	3.4	Take and pass the Delaware State Radiation Safety Test prior to operation of equipment in a community classroom setting.
	3.5	Demonstrate proper safety measures for dental equipment operator and other auxiliaries.
	3.6	Demonstrate all safety measures necessary for protection of the patient.
	3.7	Describe types and uses of intro-oral film.

		3.8	Describe types and uses of extra-oral film.
		3.9	Demonstrate proficiency in exposing intro-oral periapical, bite wing and occlusal film.
		3.10	Identify and demonstrate the function of darkroom equipment utilized in film processing and the care and cleaning of the darkroom.
		3.11	Accurately demonstrate proficiency in processing and using exposed film.
		3.12	Assess skills according to education received in school and/or on the job.
4.	Job seeking skills.	4.1	Identify types of jobs available in the dental field.
		4.2	Locate employment opportunities.
		4.3	Prepare neatly, with accurate spelling, a letter of application.
		4.4	Complete a sample application form.
		4.5	Demonstrate appropriate interviewing techniques.
		4.6	Identify and demonstrate acumen for responsibility in maintaining employment.

5. Procedures for leaving employment.	5.1	Identify appropriate reasons for terminating employment.
	5.2	Describe the necessity of maintaining a good recommendation and an amenable separation.

Communications

1. Communication skills.	1.1	Demonstrate ability to meet, greet and deal with patients during stressful and nonstressful situations in a professinal manner.
	1.2	Demonstrate ability to communicate with co-workers in a clear, concise, professional manner at all times.
	1.3	List the types of office visitors, other than patients, that may be expected in the dental office.
	1.4	Identify the types of written materials used to communicate with patients and type samples of each.
	1.5	Demonstrate skills in typing sample business letters using the block style, modified block and idented style of letter.
	1.6	Demonstrate correct method of answering calls from and placing calls to patients.
	1.7	Identify the kinds of business calls that originate from the dental office.

1.8 Demonstrate the procedure for placing a business call in a professinal manner.

1.9 Demonstrate the activities for keeping the reception room neat, orderly and comfortable appearing.

2. Maintenance of financial, patient and laboratory records.

2.1 Demonstrate the ability to record charges made, payments received and balance due on a patient ledger card; a daily journal page and a patient receipt using a coding system.

2.2 Describe the importance of keeping accurate records.

2.3 Identify the types of expenses involved in a dental office.

2.4 Describe the necessity for keeping accurate records of all costs and of all disbursements.

2.5 Identify types of patient's records that must be kept in a dental office, laboratory or clinic.

2.6 Identify types of business records that must be kept in a dental office, laboratory and clinic.

2.7 Identify the types of basic filing systems and demonstrate ability to file documents using each system.

2.8 Identify filing systems specifically used in the dental practice.

2.9 Explain the difference between active and inactive files.

2.10 Explain reasons for and methods of good record protection and storing records properly.

2.11 Prepare a family and an individual ledger card including charges, payments and balances.

2.12 Demonstrate understanding of necessity for keeping precise accounting of any records that leave the office on a permanent or temporary basis.

2.13 Prepare a complete daily journal page using simulated data as given by the instructor to include patient's name, services rendered, charges made, payments received and balance due.

2.14 Explain when it is necessary to give a receipt and will prepare a payment receipt using simulated data from the instructor to include date, amount received, from whom received and balance due.

2.15 Prepare a bank deposit slip using simulated information as provided by the instructor and correctly enter the deposit amount in the check register.

2.16 Complete a blank check and will understand the importance of complete and accurate data.

2.17 Enter the check data in the check register.

2.18 Demonstrate how to void a check and explain when it is appropriate to do so.

2.19 Demonstrate the methods for accepting a credit card for payment, including all of the items on the card to be alerted to.

2.20 Accurate reconcile a bank statement using simulated data as provided by the instructor.

2.21 Prepare the records necessary for the presentation of fees.

2.22 List the most common methods for making payments for treatment.

2.23 Demonstrate knowledge of importance of making definite financial arrangements prior to the beginning of treatment.

2.24 Prepare a statement for mailing with all information required.

2.25 Understand the importance of the information being accurate and the billing accomplished routinely.

2.26 List the advantages of computer billing and prepare the data necessary for submission to the processing center.

2.27 Explain methods used to prevent accounts from becoming delinquent.

2.28 Prepare a collection letter.

2.29 Describe the purpose and uses of a petty cash fund.

2.30 Describe function of a collection agency.

2.31 Complete the petty cash voucher.

2.32 Explain the necessity for accounting for money spent.

3. Appointment records and time control procedures.

3.1 Arrange a simulated office/desk area in an organized manner to allow for most efficient use of supplies and equipment.

3.2 Demonstrate ability to select and use the different types of appointment books.

3.3 Demonstrate skill in using an appointment book for routine office information.

3.4 Prepare a patient appointment card duplicating the date and time previously recorded in the appointment book.

		3.5	Demonstrate ability to confirm appointments by telephone and in writing.
		3.6	Prepare a daily schedule.
		3.7	Explain the purpose of a recall system and when a patient is placed on that system.
		3.8	Demonstrate skill in using the recall system.
4.	Completion of dental/medical insurance forms.	4.1	Explain the types of dental coverage.
		4.2	Complete the basic information needed for insurance claim forms.
		4.3	Determine the portion of treatment charges covered by the insurance sponsor, any deductible amounts and the portion of the charges that must be paid by the patient.
		4.4	Review form for completeness and accuracy prior to submission for payment.
5.	Supply ordering, control, inventory and budgeting procedures.	5.1	Demonstrate ability to organize supplies typically used in a dental practice.
		5.2	Explain the necessity of organizing inventory.
		5.3	Prepare an itemized inventory list to establish organization.
		5.4	Explain how to order, when to order and from whom to order products typically used in a dental office.

5.5 Complete requisition and purchase order form.

5.6 Prepare an estimated supply budget.

Pre-clinical sciences.

1. Skills and procedures in clinical settings.

1.1 Identify, locate and describe function of nine body systems.

1.2 Identify the major classifications of micro-organisms.

1.3 Demonstrate knowledge of the differences in sterilization, disinfection, sepsis, asepsis and sanitization.

1.4 Identify common methods of transmission of diseases.

1.5 Demonstrate methods of sterilization, disinfection and care and maintenance of instruments and materials commonly used in a dental office.

1.6 Demonstrate a basic understanding of the history of pharmacology.

1.7 Identify the drugs most commonly used in the dental profession.

1.8 Demonstrate the appropriate care and maintenance of drugs used in the dental office.

1.9 Demonstrate knowledge of the auxiliary's responsibilities when drugs are administered.

1.10 Demonstrate knowledge of prescription use.

1.11 Identify the drug sources.

1.12 Identify and set up an armamentarium and assist during a demonstration procedure of local anesthetic administration.

Chairside procedures.

1. Preparing patients for treatment and dismissal.

1.1 Demonstrate methods for cleaning instruments prior to sterilization.

1.2 Obtain and record on, appropriate chart, patient's health history and flag any information to which dentist should be alerted.

1.3 Demonstrate correct seating and positioning of the patient.

1.4 Prepare patient for dismissal.

1.5 Demonstrate and explain the use and care of the chairside unit components.

1.6 Demonstrate methods and explain reasons for keeping the operatory clean and orderly.

1.7 Prepare armamentarium in proper sequence.

1.8 Demonstrate appropriate assisting techniques.

1. Advanced dental sciences.

1.1 Identify and locate the parts and structures of a tooth.

1.2 Define eruption process of deciduous teeth and permanent teeth and give approximate ages of eruption dates.

1.3 Define the process of the resorption of deciduous roots.

1.4 Identify and locate the bones, processes and foremens of the oral cavity.

1.5 Identify the location and function of the temporomandibular joint.

1.6 Define and locate the major muscles of mastication.

1.7 Identify, locate and describe the function of the major salivary glands.

1.8 Identify, locate and give the function of the major cranial nerves.

1.9 Identify, locate and describe functions of the arteries and veins of the head and neck.

1.10 Identify, locate and chart landmarks of the oral cavity.

1.11 Name and locate the maxillary and mandibular arch, the quadrant division and the anterior and posterior teeth.

1.12 Name, locate position and describe the function of each primary (deciduous) tooth.

1.13 Define, locate and identify each surface of an anterior and posterior tooth selected at random by the instructor.

1.14 Name, locate position and describe the function of each permanent (secondary) tooth in a normal oral dentition.

1.15 Define, locate and identify each surface of an anterior and a posterior tooth selected at random by the instructor.

1.16 Identify landmarks peculiar to each tooth on both maxillary and mandibular arches.

1.17 Correctly spell, locate and abbreviate multiple tooth surfaces by appropriate groupings.

1.18 Identify by number and possible locations the commonly used cavity classifications to include CII, CIII, CIIII, CIV and CIV.

1.19 Prepare sample charts from prepared tapes or simulated charting activity of the permanent dentition.

1.20 Describe by name and condition the most common anomalies in dental development.

1.21 Describe by name, condition and appearance diseases of the teeth.

1.22 Describe and name by condition diseases of the oral soft tissue and conditions of the tongue.

1.23 Describe the types and symptoms of oral cancer.

1.24 Identify and describe the more common of the secondary oral disorders manifested in the oral cavity from systemic diseases.

1.25 Describe by name and appearance of the oral cavity, normal conditions that may appear due to the onset of a nutritional disorder or malfunction.

2. Advanced chair side procedures.

2.1 Prepare proper armamentarium and assist in the exact recording of dental conditions and services.

2.2 Prepare proper armamentarium for specified services.

2.3 Identify by name and number and demonstrate use and care of burs, stones, points, discs and wheels.

2.4 Identify types of matrices.

2.5 Demonstrate placement of appropriate matrix and wedge for specified cavity preparation.

1. Basic and advanced dental chair side procedures.

1.1 Explain the procedure and name the armamentarium for root canal therapy, pulpectomy, pulpotomy, apicoectomy, posterior root resection and bleaching nonvital teeth.

1.2 Define the three major classifications of malocclussion, i.e. CLII, CLIII and CLIV.

1.3 Demonstrate methods for control of patients who are apprehensive and methods for motivating the child patient to care for his teeth, through simulated activity.

1.4 Assist with procedures as requested to include impression taking, placing and removal of separators, fitting, cementing and removal of orthodontic bands, fitting of removable appliances, taking extra-oral cephalmoetric film fitting and removal of arch wires and instructing patients in oral hygiene.

1.5 Identify and explain purposes of mouth guards, space maintainers and bite planes for children.

1.6 Demonstrate auxiliary's responsibility in assisting with procedures previously listed.

1.7 Identify by name and use and demonstrate care, cleaning and sharpening of commonly used periodontal instruments.

1.8 Explain the corrective procedures to include periodontitis, gingivitis, periodontal pocket, scaling, curettage and planing and gingivectomy.

1.9 Identify by name and use and demonstrate special care and cleaning of commonly used oral surgery instruments.

1.10 Explain the most commonly performed oral surgery procedure, the armamentarium and the dental auxiliary's role in each.

1.11 Describe oral pathology, its necessity and relationship to dentistry.

1.12 Participate in community preventing dentistry or in a community-run clinic; school exams, teaching oral hygiene and nutrition to elementary students and charity clinics.

2. Dental laboratory skills necessary for chair side assistants.

2.1 Identify by name the composition of alloy and demonstrate manipulative skills in handling of an amalgam.

2.2 Identify by name the physical properties of gold; explain the difference between gold foil; and methods for the casting of gold alloy.

2.3 Identify by name the physical properties of each and demonstrate proficiency in handling either Type I or Type II stone.

2.4 Identify by name the properties and demonstrate accurate method(s) of mixing composites (restorative resins).

2.5 Demonstrate knowledge in physical properties, care, uses and storage of plaster.

2.6 Know the physical properties of irreversible colloids.

2.7 Know the physical properties of hydrocolloids.

2.8 Demonstrate manipulative skills in preparing equipment and impression materials.

2.9 Identify by name the physical properties and demonstrate proficiency in the handling of rubber base impression material.

2.10 Identify by name the properties of and demonstrate proficiency in the preparation, care and storage of silicone impression materials.

2.11 Identify the various types of waxes, their properties, use, care and maintenance.

2.12 Identify the many types of resins, their properties and uses.

2.13 Demonstrate the procedure for constructing a custom tray, the quadrant to be specified by the instructor.

2.14 Pour up an impression of irreversible colliod using custom tray previously constructed with die stone and regular stone.

2.15 Demonstrate procedure for securing the cast to the bite registration, mounting on a crown and bridge articulator and explain the purpose of articulating the cast.

2.16 Demonstrate proceldure for trimming and polishing the poured impressions to proportions as designated by the instructor.

2.17 Pour a maxillary and mandibular impression using orthodontic plastic and alginate (irreversible hydrocollid) impressions.

2.18 Fit orthodontic bands to casts.

2.19 Demonstrate welding of attachments to orthodontic bands.

2.20 Demonstrate procedure for filling the die with wax, carving the wax to the contours of the restoration and spruing of the wax pattern.

2.21 Explain procedure (both mechanical and automatic) and anticipated result and name armamentarium necessary for casting.

2.22 Identify by name and use the armamentarium and explain the procedure for construction of a removable partial denture.

3.	Cooperative work experiences.	3.1	Demonstrate skills as dental assistant in a work setting.

Student Organizations

1.	Organization benefits and functions.	1.1	Identify purposes and benefits of te related student organization.
		1.2	Match terms associated with HOSA to the correct definitions.
		1.3	Identify the purposes of the HOSA organization.
		1.4	Name the organization levels of HOSA.
		1.5	Match chapter officers to their duties.
		1.6	Name essentials of a good chapter.
2.	Parliamentary procedure.	2.1	conduct a meeting using the proper order of business and parliamentary procedure.
		2.2	Name the basic principles of parliamentary procedure.
		2.3	Name the qualifications a member of a parliamentary team should have.
		2.4	Select from a list steps that make a good meeting.
		2.5	Participate in meetings at state and local levels.

CONTENT STANDARDS
FOR
ALLIED HEALTH
17.0602 Nursing Assisting

17.0602 Nursing Assisting -- an instructional program that prepares individuals to perform routine tasks under the supervision of a registered or licensed practical nurse, in the provision of personal care to individuals who are receiving nursing care.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. The health care team.	1. Function as a member of the health team within the health care facility and/or community.
	1.1 Identifies the differences between acute care and long-term care.
	1.2 Identifies the cultural aspects of patient care.
2. Communication skills, ethical and legal roles and responsibilities.	2. Demonstrates effective communication, ethical and legal behavior.
	2.1 Demonstrates effective verbal and nonverbal communication on the clinical unit with the team leader, co-workers, patients and their families.
	2.2 Writes observations, using appropriate medical terminology and abbreviations, in completing clinical agreements.
	2.3 Makes nursing observations concerning the patient's physical condition and emotional changes in the report and chart.
	2.4 Observes and reports patient behavior.

	2.5 Uses the techniques of reality orientation when dealing with disoriented or potenially disoriented patients/residents.
	2.6 Demonstrates communication skills with the deaf, blind, confused, and other special populations.
	2.7 Demonstrates ethical and legal behavior by maintaining the standards set forth by the health care professionals.
	2.8 Describes the patient's rights as set forth in the patient's bill of rights.
3. Patient safety.	3. Maintains a safe environment for the patient.
	3.1 Provides a safe, clean, comfortable environment for the patient.
	3.2 Identifies environmental safety hazards, prevention methods and disaster plans.
	3.3 Identifies the most frequently incurred health care facility accidents, that relate to aging, and methods of preventing these accidents.
4. First Aid.	4. Provides basic emergency care.
	4.1 Provides basic first aid.
	4.2 Performs emergency cardiopulmonary resuscitation and abdominal thrust.

5. Anatomy and physiology.	5. Identifies the organization of the human body, its systems, structure and functions. 5.1 Identifies the organization of the body. 5.2 Identifies the basic structure and function of the body systems.
6. Nutrition and its effects on patients.	6. Applies the principles of basic nutrition to patient care. 6.1 Describes basic nutrition. 6.2 Identifies the four food groups. 6.3 Identifies the basic nutrients and their use in the body. 6.4 Identifies therapeutic diets, the foods included in each specific diet, and the conditions for which special diets are prescribed. 6.5 Identifies cultural variations in diet. 6.6 Describes potential dietary problems of the aging.
7. Controlling infection.	7. Demonstrates the general principles of cleanliness (asepsis). 7.1 Describes general principles of asepsis. 7.2 Demonstrates the following methods of practicing medical asepsis:

a. Handwashing: General - for all nursing care.

Specific - isolation or protective care.

b. Isolation: Putting on gown for isolation.

Growning out of isolation.

Double bagging out of isolation.

Reverse isolation.

7.3 Identifies the infectious process and modes of transmission of disease.

8. Bedmaking.

8. Makes beds.

8.1 Makes a closed bed.

8.2 Makes an open bed.

8.3 Makes an occupied bed.

8.4 Makes a postoperative bed.

8.5 Uses a draw sheet and/or lift sheet.

8.6 Makes a traction bed.

9. Personal care and grooming for patients.	9. Provides the patient with personal care. 9.1 Gives a complete bath. 9.2 Gives a partial (assist) bath. 9.3 Gives a back rub. 9.4 Gives a tub bath or shower. 9.5 Gives perineal care. 9.6 Gives mouth care, denture care. 9.7 Gives hair care and shampoo. 9.8 Gives fingernail and toenail care. 9.9 Gives the patient a shave. 9.10 Gives clothing care (change patient's gown and assist to dress). 9.11 Gives a.m. and p.m. care.
10. Measuring vital signs.	10. Takes vital signs. 10.1 Identifies normal range for routine vital signs. 10.2 Measures and records temperature (oral, axillary, and rectal) using glass or electronic thermometer.

10.3 Measures and records pulse (radial, carotid, and brachial).

10.4 Measures and records respirations.

10.5 Measures and records blood pressure.

10.6 Measures and records height and weight.

11. Elimination.

11. Provides for elimination.

11.1 Assists the patient with the use of the emesis basin, bed pan, urinal commode, and toilet seat extension.

11.2 Measures and records fluid intake and output.

11.3 Identifies the reasons why a patient may need to force or restrict fluids.

11.4 Gives cleansing (SS & TAP H_2O) enema.

11.5 Gives fleet enema.

11.6 Gives oil retention enema.

11.7 Gives tidal wave/Harris flush.

11.8 Inserts a rectal tube.

11.9 Reinforces bowel and bladder training.

11.10 Provides care for the incontinent patient.

12. Principles of body mechanics.

12. Demonstrates safe body mechanics by lifting or moving any given object or patient.

12.1 Turns the patient on his/her side.

12.2 Logrolls the patient with spinal impairment.

12.3 Helps the patient move up in bed.

12.4 Moves the helpless patient up in bed.

12.5 Helps the patient move to a sitting position with feet dangling.

12.6 Assists the patient to transfer from bed to:

- a. a wheelchair.
- b. a guerney.
- c. a commode.

12.7 Assists the patient out of bed and to ambulate.

12.8 Transfers patient using:

Transfer belt.

Mechanical lifters.

13. Positioning dependent patients.	13. Positions the patient in the following positions, using good body alignments: 13.1 Supine. 13.2 Prone. 13.3 Sim's. 13.4 Knee-chest. 13.5 Side-lying. 13.6 Fowler's. 13.7 Trendelenberg. 13.8 Lithotomy. 13.9 Orthopnic.
14. The assistant's role in a physical examination.	14. Assists with physical and diagnostic examination.
15. Comfort devices.	15. Uses footboards, handrolls, trochanter rolls, bed cradles, and bedboards.
16. Range of motion exercises.	16. Provides Range of motion exercises.
17. Care of patients with casts or in traction.	17. Provides personal care for the patient in a cast or in traction.
18. Recreation and rehabilation activities.	18. Provides recreational and rehabilitative activities and activities of daily living for the geriatric patient/resident.

19. Pressure sores.	19. Prevents and cares for Decubitus Ulcers. 19.1 Identifies skin changes that occur in aging. 19.2 Recognizes and reports potential skin problems.
20. Application of heat and cold.	20. Applies heat and cold treatments utilizing safety measures. 20.1 Applies warm moist compress. 20.2 Applies hot soaks to extremities. 20.3 Prepares and gives or assists the patient with the sitz bath. 20.4 Applies a heat treatment, utilizing: a. heat lamp. b. heat pack. c. heating pad. d. aquamatic-K pad. 20.5 Applies an ice cap, collar, or cold compress.
21. Preparing, serving, and feeding patients.	21. Prepares, serves and feeds patients. 21.1 Prepares the patient for meals, including hygiene and proper positioning.

	21.2 Serves food trays.
	21.3 Feeds the patient - including the unsighted and aging, helpless person.
	21.4 Assists the patient to eat, and assist the aging to feed self.
	21.5 Removes food trays.
	21.6 Serves nourishments and water.
22. Collection of stool specimen.	22. Collects stool specimen for culture, ova, and parasites, and occult blood or guaiac.
23. Procedural care of Gastrointestinal tubes.	23. Provides nursing care for patients with gastrointestinal tubes. For example: N.G. Feeding, T-tube.
24. Ostomy care.	24. Provides ostomy care.
	24.1 Applies ostomy appliances.
	24.2 Irrigates the established colostomy.
25.Intravenous care.	25. Provides personal care for patients receiving intravenous therapy.
	25.1 Observes the patient for transfusion reaction.
	25.2 Provides personal care for patient receiving oxygen therapy and observe safety precautions.

26. Care of patient and specimen during specimen collection.	26. Collects sputum specimen. 26.1 Provides personal care for patient with urinary catheter. a. Identifies the types of urinary catheters and when each is used. b. Empties the Indwelling Catheter Drainage bag including measuring and recording output. c. Provides perineal care for a patient with a urinary catheter.
30. Urine specimen.	30. Provides personal care for patients receiving bladder irrigations. 30.1 Strains urine. 30.2 Collects urine specimens. 30.3 Collects urine specimen for routine analysis. 30.4 Collects clean-catch or mid-stream urine specimen. 30.5 Collects and labels each specimen and send the specimen to the laboratory, with appropriate information.
31. Urine testing.	31. Tests urine utilizing routine methods: For example:

	31.1 Clinitest and acetest of urine.
	31.2 Bili-Labstik of urine.
	31.3 Keto-Diastix of urine.
	31.4 Tes-tape.
	31.5 Hemastix.
	31.6 Measure specific gravity.
32. Vaginal douche procedure.	32. Gives unmedicated vaginal douche.
33. Observations.	33. Observes basic neurological changes.
34. Seizures.	34. Applies seizure precautions.
35. Protective restraints.	35. Applies protective restraints, utilizing:
	35.1 Soft restraints such as jackets, wrist, ankle.
	35.2 Side rail, padded.
	35.3 Geriatric chair.
	35.4 Locked posey.
36. Preoperative care.	36. Provides preoperative care.
	36.1 Identify the steps in preparing the skin for surgery.

	36.2 Describe the NPO procedure for a surgical patient. 36.3 List the duties for care of a patient on the day of surgery. 36.4 Identify the steps in making a surgical bed.
37. Postoperative care.	37. Provides postoperative care including turn, cough and deep breathe. 37.1 Explain the procedure for receiving the postoperative patient back into his room. 37.2 Identify steps in giving immediate postoperative care. 37.3 Identify steps in giving routine postoperative care. 37.4 Checks the patient's dressing for drainage and describes the drainage.
38. Binders and bandages.	38. Applies the following binders and bandages: 38.1 Ace bandage. 38.2 Scultetus binder. 38.3 T-binder. 38.4 Flexible abdominal binder. 38.5 Sling.

	38.6	Anti-embolism stockings.
39. Procedural care of drainage tubes.	39.	Provides personal care for patient with tubes connected to gravity or suction (drainage tubes).
40. The dying patient and postmortem care.	40.	Identifies and recognizes the stages of dying, provides care for the dying patient and gives postmortem care.
	40.1	Describe ways to handle a patient's thoughts about death.
	40.2	Identify special bedside care needs of the dying patient.
	40.3	List some of the ways to help the dying patient's family.
	40.4	Name the steps in giving postmortem care.
	40.5	Describe the use of each item in the shroud pack.
41. Admission transfer and discharge of patients.	41.	Assists in the admission of the patient to the nursing unit, using appropriate forms.
	41.1	Assists in the discharge of the patient from the nursing unit, using appropriate forms.
	41.2	Assists with the transfer of patient from one nursing unit or room to another, using appropriate forms.

42. Aging and related issues.	42. Describes aging and related issues. 42.1 Describes the aging person. 42.2 Describes the role of the elderly in the home and community, including cultural aspects. 42.3 Describes the learning capacity of the aging.
43. The aging process.	43. Describe the aging process. 43.1 Identifies the major physical system changes in the aging person. 43.2 Discusses the emotional stresses which may be apparent during the aging process. 43.3 Identifies the major diseases found in the aging. 43.4 Demonstrates specific skills and techniques used when providing physical, social and emotional care to the aging patient/resident.
44. Physical disorders.	44. Identifies physical disorders. 44.1 Identifies physical disorders common to aging. 44.2 Identifies causes of physical disorders.

	44.3 Identifies pertinent observations to be made by the nursing assistant.
	44.4 Recognizes and reports changes.
45. Psycho-social aspects of aging.	45. Identifies the Psycho-social aspects of aging.
	45.1 Identifies basic human needs, including physical (safety, shelter, food, clothing) socio cultural (family, friends) psychological (emotional, self-esteem, and self-actualization).
	45.2 Describes the personality and attitude changes that may occur in aging.
	45.3 Identifies possible losses that may occur in aging.
	45.4 Explains how societal attitudes contribute to psychological problems of the aging.
	45.5 Describes ways that the elderly may be subject to abuse and identify contributing factors.
	45.6 Identifies common myths related to sexuality in aging.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

- a. Punctuality.
- b. Confidentiality.
- c. Honesty.
- d. Cooperation.
- e. Cleanliness of self and work place.
- f. Productivity.
- g. Communication.
- h. Completion of tasks.
- i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
ALLIED HEALTH
17.0605 Practical Nursing

17.0605 Practical Nursing -- an instructional program that prepares individuals to assist in providing general nursing care under the direction of a registered nurse, physician, or dentist.

Program Objective		Standard of Student Expectation
The program will provide instruction in:		The student will be expected to:
1. Personal and vocational relationships of the practice nurse.	1.1	Discuss habits, philosophy and objectives and interpersonal relationships as they apply to the practical nurse and the nursing profession.
	1.2	Describe the role of the nurse in dealing with a patient's family.
	1.3	Identify the scope of practice for the practical nurse under licensure.
	1.4	Discuss career opportunities and responsibilities.
2. Anatomy Physiology	2.1	Identify and discuss the life functions.
	2.2	Define the chemical processes within the body.
	2.3	Name the body systems and their functions.

3. Skeleton system.	3.1	Name the major bones of the body.
	3.2	Name and define the main types of joints and joint motions.
	3.3	Identify the major disease disorders of the skeleton system.
	3.4	Identify types of bone fractures.
4. Muscular system.	4.1	Describe the types and functions of muscles.
	4.2	Describe the muscular system.
	4.3	Identify the major disorders of the muscular system.
5. Integumentary system.	5.1	List and describe the functions of the skin.
6. Circulatory system.	6.1	Describe the components and functions of the circulatory system.
	6.2	Identify the disorders of the circulatory system.
7. The heart.	7.1	Describe the structure of the heart and its various functions.
	7.2	Identify and describe the diseases of the heart.
	7.3	Explain the difference between types of circulation.

8. Blood vessels.	8.1	**List the types of blood vessels.**
	8.2	**Identify the principal blood vessels of the body and their functions.**
9. The blood.	9.1	**List the important components of the blood and describe its make-up and functions.**
	9.2	**Recognize the various blood types.**
	9.3	**Identify and describe the disorders of the blood.**
10. Cells, tissues, tumors.	10.1	**Describe the properties and functions of the cell.**
	10.2	**Describe cell division.**
	10.3	**Describe the kinds of muscle tissues.**
	10.4	**Describe the difference between benign and malignant tumors.**
	10.5	**Describe the detection and treatment modalities of cancer.**
11. Membranes.	11.1	**Describe the characteristics of membranes.**
	11.2	**Label the kinds of membranes.**
12. Respiratory system.	12.1	**Identify the respiratory organs on a diagram.**
	12.2	**Identify and describe the disorders of the respiratory system.**

13. Digestive system.	13.1	Describe the digestive system.
	13.2	Recognize the functions of the digestive system.
14. Urinary system.	14.1	List the organs which make up the urinary system.
	14.2	Describe the functions of the organs in the urinary system.
15. Human reproduction.	15.1	Explain the process of fertilization.
	15.2	Define key words related to the reproductive system.
	15.3	Describe the menstruation process.
	15.4	Identify and describe the disorders in the male and female reproductive system.
	15.5	Explain the stages of pregnancy.
	15.6	Discuss the development of the embryo.
	15.7	Describe a cross section of the breast.
	15.8	Identify and describe the disorders of pregnancy.
	15.9	Define the types of abortions.
	15.10	Explain the menopause syndrome.

16. The lymphatic system and lymphoid tissue.	16.1	Identify the parts and structures of the lymphatic system.
	16.2	Recognize the functions of the lymphatic system.
17. Glands and hormones.	17.1	Identify the glands and the hormones they secrete.
18. The brain, spinal cord, and the nervous system.	18.1	Describe a nerve system.
	18.2	Describe the brain and spinal cord.
	18.3	Identify the parts of the peripheral system and the organs involved.
19. The sensory sytem.	19.1	Describe the pathway of light through the eye.
	19.2	Identify the parts of the eye.
20. Disease and disease producing organisms.	20.1	Define disease and disease producing organisms.
21. Pharmacology for the practical nurse.	21.1	Discuss drug legislation and standards.
22. Practical nursing math.	22.1	Demonstrate mathematical skills needed in practical nursing.
23. Basic nutrition and diet therapy.	23.1	Discuss practices of basic nutrition and diet therapy.
	23.2	Define vocabulary words related to nutrition.

24. Using abbreviations and medical terminology.	24.1	Recognize and match medical abbreviations commonly used by the physician and nursing professionals.
25. Conditions of illness.	25.1	Identify the signs and symptoms of contagious diseases.
	25.2	Identify contagious diseases and the organisms that causes the diseases.
26. Vital signs temperature, pulse.	26.1	Discuss the vital signs.
27. Respirations.	27.1	Describe the types of respirators.
	27.2	Identify the types of respiration, the abnormal name, and factors affecting respiration.
	27.3	Demonstrate how to take and chart respirations.
28. Blood pressure.	28.1	Match the descriptions of systolic and diastolic blood pressure and the normal ranges.
	28.2	List factors which change blood pressures.
	28.3	Demonstrate how to take and record a blood pressure.
29. Body mechanics.	29.1	Explain the principles and body positions used in using body mechanics.

30. Assessing the patient's state of health.	30.1 Identify terms used and purposes for assessing the patient's state of health.
	30.2 List the common special examinations, their purposes and nursing considerations.
31. Measures to promote personal hygiene.	31.1 Discuss hygiene care.
32. Patients record and nursing care plan.	32.1 Discuss how to admit, discharge, and transfer patients.
33. Measure to promote elimination from the urinary bladder.	33.1 Define terms appearing in measures to promote elimination from the urinary bladder.
34. Practices of medical and surgical asepsis.	34.1 Define the terms related to medical/surgical asepsis.
35. Measures to promote elimination from the large intestines.	35.1 Define the terms used in elimination from the large intestines.
36. Measures to promote exercise and activity.	36.1 Discuss the terms used in promoting exercise and activity.
37. Measures to promote comfort, rest and sleep.	37.1 Discuss terms related to the measures to promote comfort, rest and sleep chapter.
38. Basic preoperative and postoperative nursing care.	38.1 Discuss terms related to pre/postoperative nursing care.
39. The patient and death.	39.1 Discuss terms related to death and the patient.

40. The impact of illness on an individual.	40.1	Describe how one's own life changes if hospitalization occurs.
41. Cultural components of illness.	41.1	Describe the characteristics basic to all cultures.
42. The aging individual.	42.1	Relate the nursing actions that provide for safety in relation to body changes in the aging process.
43. Causes of disease and methods of treatment.	43.1	Describe factors associated with stressors causing disease.
44. The patient with an inflammation.	44.1	Discuss terms that relate to the patient with an inflammation.
45. The surgical patient.	45.1	Describe the activities of the nurse that helps to reduce fear and anxiety of the patient and family who face surgery.
46. The patient in pain.	46.1	Compare nursing observations for a patient experiencing post-operative pain with those for a patient with chronic low back pain.
47. The emergency patient.	47.1	Demonstrate the procedures for: heat exhaustion; heat stroke; mouth-to-mouth breathing; bandaging; splints and slings.
48. The patient with neoplastic disease.	48.1	Discuss the nursing actions to relieve the discomforts accompanying each of the main treatments of cancer.

49. The patient with an allergy.	49.1	Describe the roles of the practical nurse in common treatment methods for the patient with an allergy.
50. The patient with disease of the heart.	50.1	Describe the role of the practical nurse in assisting with diagnostic studies.
51. The patient with a disease of the blood vessels.	51.1	Describe the role of the practical nurse in assisting with diagnostic studies related to the patient with blood vessels disorders.
52. The patient with a disease of the blood/lymph.	52.1	Describe the role of the practical nurse when assisting with diagnostic studies of blood/lymph.
53. The patient with a disease of the respiratory system.	53.1	Label the noraml pathway of oxygen and carbon dioxide through the respiratory system.
54. The patient with a disease of the gastrointestinal system.	54.1	Describe the responsibilities of the practical nurse when assisting with the diagnostic procedures used to diagnose gastro-intestinal disorders.
55. The patient with a disease of the liver, bilary tract, pancreas.	55.1	Discuss the manufacturing, storage, metabolic and detoxifying functions of the liver, gallbladder and pancreas.
56. The patient with a disease of the musculoskeletal system.	56.1	Define the medical terms commonly used in caring for the patient with a disease of the musculoskeletal system.

57. The patient with an endocrine disorder.	57.1	Describe the endocrine glands, their hormones, action of each hormone and symptoms that occur with hypo- hyper secretions.
58. The patient with the disease of the reproductive system.	58.1	Relate structure of the reproductive system to common surgical procedures or disorders.
	58.2	List the responsibilities of the practical nurse when assisting with gynecologic examinations.
59. The patient with the disease of the eye.	59.1	Establish relationships between medical terms used when caring for the individual with a disease of the eye.
60. The patient with a disease of the ear.	60.1	Compare and contrast medical terminology used when caring for a patient with a disease of the ear.
61. The patient with a disease of the skin.	61.1	Discuss the observations of a patient with a skin disorder to nursing implications in regard to open lesions and reddened areas.
62. Pschyiatric nursing for the practical nurse.	62.1	Recognize therapies and techniques to prevent mental illness.
	62.2	Identify the history of mental illness and its contribution to the study and treatment of mental illness.
63. Total patient care.	63.1	Discuss the concept of holistic care.

64. Physiologic aspects of patient care.	64.1 Explain the major causes of disease.
65. Fluid and elctrolyte imbalances.	65.1 Describe fluid and electrolyte inbalances.
66. Preoperative and post-operative care.	66.1 Explain the difference between medical/surgical asepsis.
67. The patient with pain.	67.1 Describe how pain affects the body.
68. Community acquired infections.	68.1 List the agent, host and environmental characteristics of the most common community. acquired infections.
69. Nosocomial infections.	69.1 Outline the most common sites, hospital services, and types of organisms associated with hosptial-assoicated infections.
70. The patient with cancer.	70.1 Describe the characteristics of cancer.
	70.2 Describe the common methods of diagnosis and treatment of cancer.
71. The dying patient and death.	71.1 Discuss the changing attitude of society towards death.
72. The geriatric patient.	72.1 Identify the physical, emotional and psychologic changes that occur with aging.
73. Rehabilitation.	73.1 Identify the goals of rehabilitation.
74. Problems affecting respiration.	74.1 Define problems in respiratory functions.

75.	Problems affecting circulation.	75.1	Define problems affecting cardiovascular functioning.
76.	Problems affecting the blood.	76.1	Differentiate between the functions of erythiocytes, lymphocytes and thrombocytes.
77.	Problems affecting nutrition and elimination of solid waste.	77.1	Define terms related to problems of gastro-intestinal system.
78.	Problems affecting elimination of fluid waste.	78.1	Identify the major anatomic parts and problems of the urinary system.
79.	Problems affecting sexuality.	79.1	Define terms related to structure, function and diseases of the reproductive system.
80.	Problems affecting endocrine function.	80.1	Identify and describe the location and problems of the endocrine glands.
81.	Problems affecting neurologic function.	81.1	Explain the purpose of the various neurodiognostic procedures.
82.	Problems affecting vision and hearing.	82.1	Identify problems of the eye and ear.
83.	Problems affecting skin integrity.	83.1	Identify the functions and problems of the skin.
84.	Problem affecting mobility.	84.1	Discuss predisposing factors, symptoms and relief measures for the patient with problems affeting mobility.
85.	Problems affecting the immune response.	85.1	Discuss problems and techniques related to the immune response.

86. Emergency nursing II	86.1	Identify places where accidents commonly occur and methods used for their prevention.
87. Maternal and child health nursing.	87.1	List the resources in your community that provide financial assistance to needy mothers and children.
88. Reproductive anatomy and physiology.	88.1	Discuss those body organs crucial to the creation of the next generation.
89. The menstrual cycle.	89.1	Chart the normal menstrual cycle.
90. The male parent: his condition.	90.1	Describe the function of the anatomy of the male reproductive system.
91. The period of gestation.	91.1	Discuss the physical, social and psychological factors involved during the gestation period.
92. Embryology, fetal development and signs and symptoms of pregnancy.	92.1	Discuss terms related to embrology and fetal development.
93. Nutrition and pregnancy.	93.1	Discuss nutrition and pregnancy.
94. Parturition.	94.1	Discuss stages of labor.
95. Labor and birth.	95.1	Discuss signs and stages of labor and birth.
96. Pain relief during labor and birth.	96.1	Discuss drug terms used in obstetrics.
97. Complications associated with pregnancy and childbirth.	97.1	Discuss high risk problems found in obstetrics.

98.	The post-partal period.	98.1	List the problems or complications associated with post-partum care.
99.	Population, ecology and reproduction.	99.1	Discuss the problems associatd with continuing world population growth.
100.	The normal newborn and his care.	100.1	Describe the vital statistics of the average newborn.
101.	Infants with special needs.	101.1	Define the terms that are related to the newborn.
102.	Growth and development of the child.	102.1	State the principles of growth and development.
103.	Ages and stages of childhood and youth.	103.1	Discuss the stages of childhood up to youth and compare the developmental stages with each age group.
104.	Preventive pediatrics.	104.1	Discuss preventive pediatrics.
105.	Immunization.	105.1	List the childhood diseases that may be prevented through immunization.
106.	Accidents and abuse.	106.1	List the factors that seem to be associated with childhood accidents.
107.	The child, family and the hospital setting.	107.1	List the kinds of information the parent should have available when preparing their child for hospitalization.
108.	Rehabilitation of the long-term pediatric patient.	108.1	Discuss the overall goal of pediatric rehabilitation.

109.	Death and dying.	109.1	Describe facots which are affected by death and dying.
110.	Hospital admission, discharge and daily care.	110.1	Discuss the admission, discharge and daily care procedures of the young child.
111.	Basic patient needs and daily planning.	111.1	Demonstrate in basic patient needs and daily planning.
112.	Selected pediatric procedures.	112.1	List the common diagnostic tests used in evaluating maternal and child health.
113.	The child surgical patient.	113.1	Discuss certain child-adult distinctions and their importance.
114.	Methods of temperature control and the therapeutic uses of heat and cold.	114.1	Discuss how the regulation of body temperatures through the use of therapy helps patients.
115.	Conditions involving the integumentary system.	115.1	Demonstrate knowledge of conditions involving the integumentary system.
116.	Isolation techniques and communicable childhood diseases.	116.1	Describe isolation techniques and communicable childhood diseases.
117.	Conditions involving the neuromuscular and skeletal systems.	117.1	Discuss the nursing care affecting neuromuscular and skeletal system.
118.	Conditions involving the respiratory and circulatory system.	118.1	Describe conditions involving the respiratory and circulatory system.

119.	Conditions involving digestion and associated metabolism.	119.1	Discuss conditions involving digastive tissue metabolism.
120.	Conditions involving the genitourinary system.	120.1	Describe conditions involving the genitourinary system.
121.	Clinical competences at eleventh grade level.	121.1	Identifies the differences between acute care and long-term care.
		121.2	Identifies the cultural aspects of patient care.
122.	Demonstrates effective communication, ethical and legal behavior.	122.1	Demonstrates effective communication and behavior on the clinical unit with the team leader, co-workers, patients and their families.
123.	Maintains a safe environment for the patient.	123.1	Provides a safe, clean, comfortable environment for the patient.
		123.2	Identifies environmental safety hazards, prevention methods and disaster plans.
124.	First Aid.	124.1	Provides basic emergency care.
125.	Anatomy and physiology.	125.1	Identifies the organization of human body, its systems, structure and functions.
126.	Nutrition and its effects on patients.	126.1	Applies the principles of basic nutrition to patient care.
127.	Controlling infection.	127.1	Demonstrate the general principles of cleanliness (asepsis).

128.	Bedmaking.	128.1	Makes beds.
129.	Personal care and grooming for patients.	129.1	Provides the patient with personal care.
130.	Takes vital signs.	130.1	Takes vital signs.
131.	Provides for elimination.	131.1	Provides for elimination.
132.	Principles of body mechanics.	132.1	Demonstrate safe body mechanics by lifting or moving any given object or patient.
133.	Positioning dependent patients.	133.1	Positions the patient in a variety of positions, using good body alignment.
134.	The assistants role in a physical examination.	134.1	Assists with physical and diagnostic examinations.
135.	Comfort devices.	135.1	Uses footboards, handrolls, trochanter rolls, bed cradles, and bedboards.
136.	Range of Motion exercises.	136.1	Provides range of motion exercises.
137.	Care of patients with casts or in traction.	137.1	Provides personal care for the patient in a cast or in traction.
138.	Recreational and rehanilitative activities.	138.1	Provides recreational and for rehabilitative activities and activities of daily living for the geriatric patient/resident.
139.	Pressure sores.	139.1	Prevents and cares for Decubitus Ulcers.

140.	Application of heat and cold.	140.1	Applies heat and cold treatments utilizing safety measures.
141.	Preparing, serving, and feeding patients.	141.1	Prepares, serves and feeds patients.
142.	Collection of stool specimens.	142.1	Collects stool specimens for culture, ova, and parasites, and occult blood or gualac.
143.	Procedural care for gastrointestinal tubes.	143.	Provides nursing care for patients with gastrointestinal tubes. For example:
144.	Ostomy care.	144.1	Provides ostomy care.
145.	Intravenous care.	145.1	Provides personal care for patients receiving intravenous therapy.
146.	Care of patient and specimen during specimen collection.	146.1	Collects sputum specimen.
147.	Urine specimen.	147.1	Provides personal care for patients receiving bladder irrigations.
148.	Urine testing.	148.1	Tests urine utilizing routine methods: For example:
149.	Vaginal douche procedure.	149.1	Gives unmedicated vaginal douche.
150.	Observations.	150.1	Observes basic neurological changes.
151.	Seizure	151.1	Applies seizure precautions.
152.	Protective restraints.	152.1	Applies protective restraints, utilizing:

153.	Preoperative care.	153.1	Provides preoperative care.
154.	Postoperative care.	154.1	Provides postoperative care including turn, cough and deep breathe.
155.	Binders and bandages.	155.1	Applies the following binders and bandages:
156.	Procedural care of drainage tubes.	156.1	Provides personal care for patients with tubes connected to gravity or suction (drainage tubes).
157.	The dying patient and postmortem care.	157.1	Identifies and recognized the stages of dying, providing care for the dying patient and gives postmortem care.
158.	Admission, transfer and discharge of patients.	158.1	Assists in the admission of the patient to the nursing unit using appropriate forms.
159.	Aging and related issues.	159.1	Describes aging and related issues.
160.	The aging process.	160.1	Describe the aging process.
161.	Physical disorders.	161.1	Identifies physical disorders.
162.	Psycho-social aspects of aging.	162.1	Identifies the psycho-social aspects of aging.
163.	Nursing care for children.	163.1	Implements nursing care for children of all age groups.

164.	Nursing process.	164.1	Identifies and defines the nursing process.
165.	Surgical asepsis.	165.1	Defines surgical asepsis and utilizes sterile techniques when performing the following procedures:
166.	Medications.	166.1	Administers medications.
167.	Intravenous infusions.	167.1	Calculates the correct infusion rate for IVs.
168.	Intravenous bottle/bag.	168.1	Accurately marks the IV bottle/bag for the number of hours it should take to infuse.
169.	Classification of medications.	169.1	Identifies the classifications of medications commonly used in the treatment of disease and disorders.
170.	Provides nursing care of adults and the aged.	170.1	Provides nursing care of adults and the aged.
171.	Care for a patient with the disorder of the musculoskeletal system.	171.1	Contributes to the assessment, planning and evaluation of nursing care for the adult or aging patient with a disorder of the musculoskeletal system.
172.	Care of the patient with cardiovascular disorder.	172.1	Contributes to the assessment, planning and evaluation of nursing care for the adult or aging patient with a disease of the cardiovascular system.
173.	Care of the patient with a disease of the respiratory system.	173.1	Contributes to the assessment, planning and evaluation of nursing care for the adult or aging patient with a disease of the respiratory system.

174. Nursing care for a disorder of the gastrointestinal system.	174.1	Contributes to the assessment, planning and evaluation of nursing care for the adult or aging patient with a disorder of the gastrointestinal system.
	174.2	Identifies and describes the preparation, procedure and postprocedure for tests used to diagnose gastrointestinal diseases.
	174.3	Implements nursing care for the adult or aging patient with a disease of the gastrointestinal system.
175. Nursing care for the patient with a urinary disorder.	175.1	Contributes to the assessment, planning and evaluation of nursing care for the adult or aging patient with a disease of the urinary sytem.
	175.2	Contributes to the assessment, planning and evaluation of nursing care for the adult or aging patient with a disorder of the reproductive system.
	175.3	Implements nursing care for the adult or aging patient with a disorder of the reproductive system.
	175.4	Contributes to the assessment, planning and eevaluationof nursing care for the adult or aging patient with a disorder of the nervous system.

175.5 Identifies and describes the preparation, procedure, postprocedure care and complications of tests used to diagnose system disease.

175.6 Implements nursing care for the adult or aging patient with a disorder of the nervous system.

175.7 Contributes to the assessment, planning and evaluation of nursing care for the adult or aging patient with disorders of the eye and/or ear.

175.8 Implements nursing care for the adult or aging patient with a disorder of the eye and/or ear.

175.9 Contributes to the assessment, planning and evaluation of nursing care for the adult or aging patient with a disorder of the integumentary system, including burns.

175.10 Implements nursing care for the adult or aging patient with a disorder of the integumentary system.

175.11 Contributes to the assessment, planning and evaluation of nursing care for the adult or aging person with an infectious disease.

175.12 Implements nursing care for the adult or aging patient with an infectious disease.

		175.13	Implements nursing care for the adult or aging patient with an allegric disorder.
176.	Mental illness.	176.1	Provides nursing care to patients with mental illness.
		176.2	Contributes to the assessment, planning and evaluation of nursing care for both adults and children with mental illness.
		176.3	Implements nursing care for patients with mental illness.
177.	Nursing care to mothers and newborns.	177.1	Provides nursing care to mothers and newborns.
		177.2	Contributes to the assessment, planning and evaluation of nursing care to mothers and newborns.
		177.3	Demonstrates nursing care to mothers and newborns.
178.	Care to children.	178.1	Provides nursing care to children.
		178.2	Contributes to the assessment, planning and evaluation of care for children of all age groups.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.	5.1 Demonstrate appropriate behavior in:

- a. Punctuality.
- b. Confidentiality.
- c. Honesty.
- d. Cooperation.
- e. Cleanliness of self and work place.
- f. Productivity.
- g. Communication.
- h. Completion of tasks.
- i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in:
	a. Social and interpersonal skills.
	b. Oral and written communication.
	c. Organization and management skills.
	d. Civic responsibilities.
	e. Parliamentary procedures.

CONTENT STANDARDS
FOR
ALLIED HEALTH
17.9999 Allied Health, Other
(Exploratory Health Occupations)

17.9999 Allied Health, Other -- any instructional program that provides individuals in junior high school the opportunity to explore allied health fields.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Health care agencies and facilities.	1.1 Define and identify listed vocabulary words.
	1.2 Write a report on a volunteer agency.
	1.3 Fill in a hospital organizational chart.
	1.4 Give reasons why the organization of health care facilities is important.
	1.5 List and define the major services in a hospital.
	1.6 Identify departments in each major service of the hospital.
2. Ethical roles and responsibilities of a health care worker.	2.1 Match vocabulary words with their correct meanings.
	2.2 List the qualities of a health care worker.
	2.3 Identify the moral responsibilities of a health care worker.
	2.4 List the responsibilities of an employee.

3. Legal roles and responsibilities of a health care worker.	3.1	List the controls on health care workers.
	3.2	Match legal terms with their correct meanings.
	3.3	Differentiate between policies and procedures.
4. Career search and overview of careers.	4.1	Define interests, values, and abilities.
	4.2	List work-related values.
	4.3	Identify resources for occupational research.
	4.4	Research health careers.
	4.5	Define diagnostic services, therapeutic services, environmental and equipment services, and general services.
	4.6	Explain a career ladder and give an example of one.
5. Using abbreviations and medical terminology.	5.1	Recognize and match abbreviations commonly used by health care workers.
	5.2	Define roots, prefixes, and suffixes.
	5.3	Define the word elements listed.
	5.4	Match medical terms with their correct meanings.

6. The health care worker and computers.

6.1 Name the general kinds of computers.

6.2 Select from a list what computers can do in the health care environment.

6.3 Match beginning vocabulary with their correct meanings.

6.4 Discuss ethics and confidentiality as they relate to computers.

6.5 Identify the functions of the three basic computer components.

7. Overview of body.

7.1 Identify the main parts of the cell and explain their functions.

7.2 Describe the relationship between cells, tissues, organs, and systems of the body.

7.3 Name the systems.

7.4 Identify terms relating to the body.

7.5 Label a diagram of the cavities of the body.

7.6 List primary kinds of tissues found in the body.

8. Skeletal system.

8.1 Label a diagram of the major bones of the body.

8.2 Name the long, short, flat, and irregular bones of the body.

8.3 Select from a list the functions of bones.

8.4 Identify immovable joints, slightly movable, and freely movable joints of the body.

8.5 Identify the major disorders of the skeletal system.

8.6 Label a diagram of the types of bone fractures.

9. Muscular system.

9.1 Differentiate between muscle and bone functions.

9.2 Label a diagram of the muscular system.

9.3 List the major functions of the muscles.

9.4 Match the basic muscle movements to their correct name.

9.5 Match the major disorders of the muscular system to their descriptions.

10. Circulatory system.

10.1 Name the organs of the circulatory system.

10.2 Label a diagram of the heart and blood vessels.

	10.3	Recognize the functions of the circulatory system.
	10.4	Identify the major disorders of the circulatory system.
	10.5	List the parts of the circulatory system through which blood flows.
11. Respiratory system.	11.1	Label the major organs of the respiratory system on a diagram.
	11.2	Describe the flow of oxygen through the body.
	11.3	Identify the major disorders of the respiratory system.
12. Digestive system.	12.1	Label a diagram of the digestive system and its accessory organs.
	12.2	Recognize the functions of organs associated with the digestive system.
13. Urinary system.	13.1	Label a diagram of the urinary system.
	13.2	Identify the function of the organs in the urinary system.

14. Glandular system.	14.1	Label the endocrine glands on a diagram.
	14.2	Match functions to the correct endocrine glands.
	14.3	Match the major disorders of endocrine glands to the correct name.
	14.4	Differentiate between the endocrine and exocrine glands.
15. Reproductive system.	15.1	Label a diagram of the male and female reproductive system.
	15.2	Match the functions of various organs in the reproductive systems.
	15.3	Match the major disorders of the reproductive system to the correct name.
16. Integumentary system.	16.1	Label a diagram of a cross selection of the skin.
	16.2	List the functions of the skin.
	16.3	List the main layers of tissue.
	16.4	Identify terms associated with disorders of the integumentary system.

17. Basic nutrition.	17.1	Name the functions of food.
	17.2	Name the basic nutrients and how they maintain body function.
	17.3	Describe the four basic food groups.
18. Therapeutic diets.	18.1	List the factors that influence food habits.
	18.2	Select therapeutic diets for physical disorders.
19. Temperature, pulse and respiration.	19.1	Define vital signs.
	19.2	List factors that influence body temperature.
	19.3	Match the normal temperature to the site where it is taken.
	19.4	Demonstrate how to take an oral, rectal, and auxilary temperature.
	19.5	Convert temperature from Centigrade to Fahrenheit and Fahrenheit to Centigrade.
	19.6	Name the temperature site that is most accurate and least accurate.

19.7 Define pulse and identify sites where pulse may be taken.

19.8 Identify a normal adult pulse rate and the common method of taking a pulse.

19.9 List factors which influence pulse rate.

19.10 Demonstrate taking and recording a radial pulse accurately.

19.11 Recognize the two parts of a respirator.

19.12 Identify the types of abnormal respirations and their names.

19.13 Select factors that affect respirations.

19.14 Demonstrate how to take and how to record respirations accurately.

20. Blood pressure.

20.1 Define blood pressure.

20.2 Match descriptions of systolic and diastolic blood pressure.

20.3 List factors which can change blood pressure.

20.4 Demonstrate how to take a blood pressure accurately.

20.5 State the normal range for blood pressure.

21. Nature of microorganisms.	21.1	Identify and define terms related to microorganisms.
	21.2	List ways microorganisms are spread and cause illness.
22. Asepsis.	22.1	Define medical asepsis.
	22.2	Identify and define terms related to medical asepsis.
	22.3	List aseptic techniques.
	22.4	Differentiate between bactericidal and bacteriostatic.
23. Isolation technique.	23.1	List and differentiate between the types of isolation precautions.
	23.2	Demonstrate the correct procedure for entering and leaving an isolation unit.
24. General safety.	24.1	Identify general safety rules.

25. Patient safety.	25.1	Explain how ambulation devices, transportation devices, postural supports, and side rails are used.
	25.2	Describe principles associated with ambulation devices, transportation devices, postural supports and side rails.
26. Fire safety.	26.1	List the elements required to start a fire.
	26.2	Explain ways to prevent fires.
	26.3	List the steps to follow in case of fire.
27. Principles of body mechanics.	27.1	Define body mechanics.
	27.2	List rules of correct body mechanics.
	27.3	List principles of body mechanics.
	27.4	Demonstrate correct lifting and moving of objects.
28. First aid.	28.1	Demonstrate the procedures for: a. Mouth-to-mouth breathing. b. Obstructed airway. c. Serious wounds.

		d. Bandaging, splints, and slings.
29. Understanding human needs.	29.1	List psychological and physical needs that must be met to maintain stability.
	29.2	Match defense mechanisms with the correct descriptions.
30. Communications.	30.1	Name elements that influence our relationship with others.
	30.2	Define communication.
	30.3	List elements necessary for communication to take place.
	30.4	List the barriers to communication.
31. How aging affects the body.	31.1	Match body systems with the common physical changes that occur during the aging process.
32. Role changes in aging.	32.1	Match the basic human needs that are met through work, environment, socialization, and family relationships.
	32.2	Identify true and false statements concerning changing roles in the aging.
33. Understanding the phychological stages in the terminally ill.	33.1	Identify true and false statements regarding the terminally ill.
	33.2	Identify and describe phychological stage of a long terminal illness.

34.	Vocational student organization membership.	34.1	Identify the advantages of participating in Vocational student organizations.
		34.2	Participate as a member of a Vocational student organization.
35.	Development of leadership skills through VSO and related activities.	35.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to:
	a. Wages, salaries and benefits.
	b. Skills needed on the job.
	c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in:
	a. Finding a job.
	b. Applying and interviewing for a job.
	c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in:
	a. Company's purpose, policies and product.
	b. Duties performed in related jobs.
	c. Labor and professional organizations.
	d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.	5.1 Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality. c. Honesty. d. Cooperation. e. Cleanliness of self and work place. f. Productivity. g. Communication. h. Completion of tasks. i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
ALLIED HEALTH
18.0901 Medical Laboratory

18.0901 Medical Laboratory -- an instructional program that describes the principles and practices of clinical laboratory procedures.

PROGRAM OBJECTIVE		STANDARD OF STUDENT EXPECTATION	
The program will provide instruction in:		The student will be able to:	
1.	Use communication skills.	1.1	Use proper terminology.
		1.2	Use proper listening skills.
		1.3	Use questioning skills.
		1.4	Use proper telephone techniques.
		1.5	Consult with specialists as needed.
		1.6	Give oral instructions.
		1.7	Give oral reports.
		1.8	Maintain professional behavior toward staff and patients.
2.	Perform clinical functions.	2.1	"Log-in" and identify specimens with accession numbers.
		2.2	Record patients results.
		2.3	File and chart patient results.

		2.4	Retrieve patient information.
		2.5	Perform typing skills.
		2.6	Perform basic data processing skills.
		2.7	Collect and record statistical data for monthly reports.
3.	Practice safety procedures.	3.1	Follow fire safety procedures.
		3.2	Wear protective equipment and clothing.
		3.3	Handle biohazard materials safely.
		3.4	Dispose biohazard materials.
		3.5	Prepare incident reports.
		3.6	Clean and disinfect the work area.
4.	Perform mathematical calculations.	4.1	Use basic mathematical skills.
		4.2	Make mathematical conversions i.e. english to metric.
		4.3	Prepare and use tables and charts.
		4.4	Prepare dilutions of specimens and reagents.
		4.5	Operate a calculator.
5.	Use laboratory equipment.	5.1	Select and use proper pipettes and glassware.
		5.2	Use proper pipetting techniques.

	Use laboratory equipment cont'd.	5.3	Measure volumes of specimens and reagents.
		5.4	Wash glassware.
		5.5	Operate a centirfuge.
		5.6	Use and care for a microscope.
		5.7	Use and care for a spectrophotometer.
		5.8	Use and care for a balance.
		5.9	Operate an autoclave.
		5.10	Use and care for a ph meter.
		5.11	Prepare reagents.
		5.12	Perform and check quality control.
6.	Perform phlebotomy.	6.1	Match patient to request slip.
		6.2	Select the correct color tube for the test requested.
		6.3	Identify correct sites for venipuncture and capillary puncture
		6.4	Perform venipuncture using vacuum tubes.

	Perform phlebotomy cont'd.	6.5	Label specimen to match request slip.
		6.6	Perform venipuncture using blood culture systems.
		6.7	Identify and handle complications with venipuncture.
		6.8	Perform capillary puncture using unopette systems.
		6.9	Perform capillary puncture using microtainer systems.
		6.10	Perform capillary puncture using capillary tubes.
7.	Process specimens.	7.1	Identify incorrect collection procedures.
		7.2	Prepare specimens for analysis.
		7.3	Prepare specimens for temporary storage.
		7.4	Select preservatives for urine specimens.
		7.5	Prepare specimens for transport.
		7.6	Process blood components.
8.	Perform urinalysis.	8.1	Describe color and clarity and odor.
		8.2	Check specific gravity using a refractometer.
		8.3	Check specific gravity using a urinometer.

	Perform urinalysis cont'd.	8.4	Perform and interpret routine biochemical reactions.
		8.5	Prepare urine sediment for microscopic elements.
		8.6	Perform and interpret pregnancy tests.
9.	Perform routine hematology.	9.1	Make a differential smear.
		9.2	Perform wright-stain techniques.
		9.3	Examine smear for integrity of stain.
		9.4	Perform a hemoglobin.
		9.5	Perform a hematocrit.
		9.6	Perfrom a white blood cell count.
		9.7	Perform a red blood cell count.
		9.8	Set up a sed-rate.
		9.9	Perform a sickle-cell screening test.
		9.10	Perfrom bleeding times.
		9.11	Make thick and thin smears for malaria.
10.	Perform chemistry.	10.1	Perform glucose test.
		10.2	Perform a blood urea nitrogen.
		10.3	Perform a creatinine.

	10.4	Perfrom a cholesterol.
11. Perform routine microbiology techniques.	11.1	Prepare media.
	11.2	Select and innoculate proper media.
	11.3	Follow proper incubation procedures.
	11.4	Perform a grain stain technique.
	11.5	Perform an occult blood on feces.
12. Perform doctor's office techniques.	12.1	Take height and weight.
	12.2	Take vital signs, temperature, pulse and respiration.
	12.3	Teke blood pressure.
	12.4	Perform electrocardiograms.
	12.5	Fix pap smears.
	12.6	Perform A B O typing.
	12.7	Perform Rh screen.
	12.8	Identify a patient in need of medical attention.
	12.9	Perform CPR.
	12.10	Sterilize equipment and utensils.
	12.11	Process insurance forms.
	12.12	Organize work load.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to:
	a. Wages, salaries and benefits.
	b. Skills needed on the job.
	c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in:
	a. Finding a job.
	b. Applying and interviewing for a job.
	c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in:
	a. Company's purpose, policies and product.
	b. Duties performed in related jobs.
	c. Labor and professional organizations.
	d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

a. Punctuality.

b. Confidentiality.

c. Honesty.

d. Cooperation.

e. Cleanliness of self and work place.

f. Productivity.

g. Communication.

h. Completion of tasks.

i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

Allied Health (Health Occupations)

Business and Office

Content Standards

WILLIAM B. KEENE, State Superintendent

THE DELAWARE DEPARTMENT OF PUBLIC INSTRUCTION

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Business and Office Occupations

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CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
06.0401 Business Administration & Management, General
Cooperative Office Occupations

06.0401 Business Administration and Management, General (Cooperative Office Occupations) -- an instructional program that generally describes the planning, organizing and controlling of a business, including organizational and human aspects, with emphasis on various theories of management, the knowledge and understanding necessary for managing people and functions, and decision making.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Pre-employment skills.	1. Describe employment trends and identify tentative career objectives based upon accurate and pertinent occupational and self-information. 1.1 Recognize individual capabilities related to career interests. 1.2 Identify interests to develop a self identity. 1.3 Identify aptitudes for vocabulary, mathematics, clerical, data, people, and things. 1.4 Determine aptitudes, traits, interests, abilities, and demands for an occupation. 1.5 Use various methods to research careers. 1.6 Set goals to give sense of direction to life and careers.

2.	Employment skills.	2.	Demonstrate an ability of employment processes and forms.
		2.1	Identify local job opportunities.
		2.2	Complete a job resume.
		2.3	Prepare a letter of application.
		2.4	Prepare for a job interview.
		2.5	Complete a typical job application form.
		2.6	Complete an employment test.
		2.7	Use the correct procedure to follow up an interview.
		2.8	Demonstrate ability to gain and maintain an entry-level office position.
		2.9	Demonstrate how a paycheck is calculated.
		2.10	Demonstrate good human relation skills in the classroom and on the job.
		2.11	Develop a program for job advancement that recognizes the characteristics needed for success.
3.	Leadership skills.	3.	Develop an awareness of applying good leadership abilities.
		3.1	Demonstrate effective citizenship through service to others.

3.2 Participate in programs to benefit school/community.

3.3 Demonstrate how personal growth is enhanced through social interaction.

3.4 Demonstrate the ability to make social business introductions.

3.5 Develop alist of rules and regulations for student field trips.

4. Economics.

4. Develop feelings for adult independence, satisfaction, achievement, and confidence in one's ability to attain economic security.

4.1 Use the services available at banking institutions when there is a need.

4.2 Open a check ing account.

4.3 Write a check and keep accurate check records.

4.4 Deposit money in a checking account.

4.5 Reconcile a bank statement with the checkbook balance.

4.6 Demonstrate how to endorse checks.

4.7 Identify the fringe benefits that tmost workers receive.

5. Communication.

4.8 Identify the two basic types of pension plans.

4.9 Identify the benefits of Social Security and their cost to the worker.

4.10 Identify voluntary and involuntary deductions that can be taken from his/her pay.

4.11 Describe the tax system in the United States.

4.12 Practice good money management.

4.13 Plan for periods of unemployment.

4.14 Develop a program of action if injured on the job.

4.15 Identify safe and healthy working conditions.

4.16 Explain his/her rights to equal career opportunities.

5. Develop effective communication skills.

5.1 Discuss the impact of modern communication technology on spending, listening, reading and writing skills.

5.2 Demonstrate nonverbal signals and how they affect communication.

	5.3	Use direct and effective speech.
	5.4	Communicate effectively by telephone.
	5.5	Use effective listening skills.
	5.6	Communicate effectively through correctly written business records.
6. Vocational student organization.	6.	Recognize the responsibilities of a leader and the importance of cooperation in a group setting.
	6.1	Explain the purpose and goals of a national student organization.
	6.2	Describe the structure of the related student organization.
	6.3	Conduct a local election and describe officer duties.
	6.4	Explain the functions of an Advisory Council.
	6.5	Identify the resource publications for a national student organization.
	6.6	Identify local public relations techniques.
	6.7	Identify the importance of cooperation in meeting committee needs and purposes.
	6.8	Participate in a variety of group activities.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
06.9999 Introduction to Business

06.9999 Business and Management, Other (Introduction to Business) -- any instructional program in business and management not described.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Banking.	1. Explain the role of banking as it affects the producer and consumer.
	1.1 Identify the steps in establishing a checking account.
	1.2 Demonstrate the correct procedures for writing checks.
	1.3 Use various kinds of endorsements.
	1.4 Reconcile a bank statement.
	1.5 Prepare savings deposit slips and savings withdrawal forms.
	1.6 Discuss the advantages of maintaining a regular savings account.
	1.7 Discuss the major services offered by banks.
2. Budgets.	2. Understand the importance of preparing a budget.
	2.1 Discuss the reasons for budgeting.
	2.2 List the categories of budget items.

3. Business organizations.	3. Gain knowledge of the types of organizations affecting the consumer. 3.1 Identify four types of business organizations and discuss the major advantages and disadvantages of each type. 3.2 Discuss the characteristics of preferred stock and common stock. 3.3 Discuss a stock in terms of exchange listings, dividends, types of stock, selling price and net change. 3.4 Discuss the various kinds of bonds.
4. Consumerism.	4. Develop a knowledge of consumer rights. 4.1 Cite the purpose of consumer publications and examine consumer publications for product features, product quality, and product rating. 4.2 Discuss the services provided by the various consumer protection agencies. 4.3 Discuss samples of guarantees and warranties in terms of time covered and items covered. 4.4 Discuss the characteristics of grades and levels.

4.5 Describe the differences between grade and descriptive labeling.

4.6 Discuss the channels of distribution.

4.7 Discuss the rights and responsibilities of consumers.

5. Credit.

5. Describe the concept of credit and its affect on the total economy.

5.1 Discuss the advantages and disadvantages of credit.

5.2 Define the major types of credit.

5.3 Examine sample credit applications; discuss information needed, and complete individual applications.

5.4 Examine credit contracts for special conditions, interest rates, when title passes, and risks involved.

5.5 Discuss the sources of credit and identify the factors that affect the cost of credit.

5.6 Calculate simple interest amounts.

5.7 Determine maturity dates of notes.

	5.8	Paraphrase the basic intent of the Truth in Lending Act and Fair Credit Reporting Act.
6. Economic systems.	6.	Gain a knowledge of the economic systems and how the consumer can effectively function in the free enterprise system.
	6.1	Discuss the basic characteristics of communism, socialism and capitalism.
	6.2	Explain the goals of free enterprise.
	6.3	Explain the basic features of free enterprise.
	6.4	Explain how price and product competition benefit the consumer.
7. Employment.	7.	Understand the importance of a planned career selection process.
	7.1	Research the duties, work conditions, worker characteristics, employment outlook, and preparation requirements for different occupations.
	7.2	Use terminology associated with employment applications.

8. Insurance.	8.	Determine the economic risk to which most persons are exposed and the need for insurance coverage.
	8.1	Discuss reasons for having insurance protection.
	8.2	Discuss factors which determine the costs for insurance.
	8.3	Discuss kinds of property one would insure.
	8.4	Explain the liability coverage provided by property insurance.
	8.5	Identify types of catastrophies that may be covered by property insurance.
	8.6	Discuss various forms of social insurance protecion including unemployment, retirement, and disability.
9. Taxes.	9.	Develop an understanding of taxes as they affect the consumer.
	9.1	Discuss the reasons for paying taxes.
	9.2	Compute sales tax amounts mathematically.
	9.3	Compute sales tax amounts using charts.
	9.4	Explain the difference between real estate and personal property taxes.

	9.5 Discuss the kinds of information needed in preparing a 1040A return.
	9.6 Prepare 1040A tax returns.
10. Travel.	10. Develop an understanding of the modes of travel.
	10.1 Discuss the various methods of travel.
	10.2 Discuss the steps to follow in planning travel.
	10.3 Calculate costs of traveling for transportation, accommodations, meals, miscellaneous expenses.
11. Leadership training.	11. Develop attributes essential to the successful operation of an organization.
	11.1 Organize and plan a program of work.
	11.2 Recognize the need for a line of authority and carry out responsibilities.
	11.3 Apply human relation skills in the organization.
	11.4 Solve problems using a decision-making process.

11.5 Apply the principles of parliamentary procedure in a meeting situation.

11.6 Prepare and deliver an effective public speech.

11.7 Describe the need for evaluation processes with a variety of management technques.

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CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0102 Business Mathematics

07.0102 Accounting and Computing (Business Mathematics) -- an instructional program that prepares individuals to perform paraprofessional duties supporting the accountant in organizing, designing, and computing numercial and financial data.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Fundamental mathematical skills.	1. Demonstrate skill in arithmetic.
	1.1 Add columns of whole numbers, decimals, fractions, and mixed numbers vertically and horizontally.
	1.2 Subtract whole numbers, decimals, and fractions applying the principle of borrowing.
	1.3 Multiply whole numbers.
	1.4 Divide whole numbers.
	1.5 Use calculator to solve problems of addition, subtraction, multiplication, and division with whole numbers, decimals, and fractions.
	1.6 Convert fractions to decimals.
2. Business records.	2. Demonstrate skill in purchases.
	2.1 Determine due dates for various discount terms.

2.2 Compute cash discounts for various terms.

2.3 Compute trade discounts.

2.4 Find rates of trade and cash discounts.

2.5 Find unit prices given quantity prices.

2.6 Find costs of portions of units given unit costs.

2.7 Compute extension, sales taxes, and totals of sales slips.

2.8 Make change correctly.

2.9 Determine selling prices for goods with various markup/markdown rates.

2.10 Determine amounts of mark/markdown on various costs or selling prices.

2.11 Determine rates of markup/markdown on costs or selling prices.

3. Consumer credit.

3. Demonstrate ability to compute transactions affecting consumers.

3.1 Distinguish between revolving and monthly charge accounts. Determine repayment cost of items purchased on account.

3.2 Compare interest earned on saving accounts versus interest payable on installment accounts to determine cost effectiveness of cash purchases.

	3.3 Compare installment buying costs for various periods of time.
	3.4 Discuss sources for borrowing including: credit union, finance companies, and banks.
	3.5 Compare repayment costs for amounts financed through credit unions, finance companies and banks.
4. Cost of residence.	4. Describe the factors involved in purchasing and renting properties.
	4.1 Identify cost factors involved in purchasing a residence.
	4.2 Compare current market values of residences to market values five years ago.
	4.3 Compute interest paid over life of mortgages at various interest rates.
	4.4 Identify cost factors involved in renting residences.
5. Metric system.	5. Compute units of measurement using the two major measurement systems.
	5.1 Name common metric units for length, area, capacity, and weight.
	5.2 Convert metric measures from one unit to another by moving decimals.
	5.3 Add, subtract, multiply, and divide metric amounts.

	5.4 Convert from metric to English measures or the reverse with the aid to conversion tables.
6. Payroll.	6. Compute employee compensation based on wages and/or salaries.
	6.1 Identify four common payroll methods.
	6.2 Identify deductions required by law.
	6.3 Identify typical voluntary deductions.
	6.4 Use payroll tables to determine required and voluntary deductions for single and married employees.
	6.5 Record employee wages and deductions in payroll registers.
7. Personal money records.	7. Demonstrate how to manage personal money records.
	7.1 Discuss reasons for budgeting.
	7.2 List categories of budget items.
	7.3 Prepare simple budgets.
	7.4 Use various kinds of endorsements.
	7.5 Use proper procedures for writing checks.

	7.6 Reconcile bank statements using cancelled checks, previous reconciliations, check records, and records of deposits so that the balances on the check records agree with the bank statement balances.
8. Savings and investments.	8. Identify the functions of savings and investments and identify ways and places to save and invest.
	8.1 Distinguish deposits, withdrawals, and balance amounts in saving passbooks.
	8.2 Compute interest on savings account balances.
	8.3 Discuss computation of compound interest.
9. Life insurances.	9. Describe how life insurance, stocks, and bonds provide income for the consumer.
	9.1 Explain cash value of life insurance.
	9.2 Use cash value tables to determine anounts policyholders can borrow.
	9.3 Use premium tables to determine rates for various types of policies.
	9.4 Compute brokers' commissions.
	9.5 Explain procedures for calculating dividends on various stock holdings.
	9.6 Interpret stock tables from daily newspapers.

	9.7	Determine income from investments when market prices, commissions, and number of bonds are known.
10. Taxes.	10.	Discuss income, sales, and property taxes.
	10.1	Identify information needed to prepare 1040A tax returns.
	10.2	Compute sales tax amounts mathematically.
	10.3	Distinguish between real and personal property.
11. Transportation costs.	11.	Describe costs involved in using private and public transportation.
	11.1	Determine annual depreciation on vehicles.
	11.2	Determine annual operating cost of vehicles.
	11.3	Identify auto insurance required by law.
	11.4	Interpret public transportation time tables.
	11.5	Compare cost of shipping goods by parcel post, express, and freight.

12. Development of leadership skills through VSO and related activities.

12.1 Demonstrate leadership development in:

- a. Social and interpersonal skills.
- b. Oral and written communication.
- c. Organization and management skills.
- d. Civic responsibilities.
- e. Parliamentary procedures.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0102 Accounting

07.0102 Accounting and Computing -- an instructional program that prepares individuals to perform paraprofessional duties supporting the accountant in organizing, designing, and computing numerical and financial data.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Starting an Accounting system	1. Prepare a beginning balance sheet the basic accounting equation
	1.1 Identify assets, liabilities, and capital that is correct in form by applying
	1.2 Define assets, liabilities, capital, and balance sheet
	1.3 Prepare a balance sheet
2. Recording the opening entry	2. Make the opening entry in the general journal
	2.1 Define terms
	2.2 Record the opening entry in the journal
3. Posting the opening entry	3. Post the opening entry to the proper debit or credit side of an asset, liability, and capital account in the ledger
	3.1 Define terms
	3.2 Label "T" accounts as to debit and credit

Posting the opening entry cont'd.	3.3 Prepare a chart of accounts.
	3.4 Post to ledger accounts.
4. Debit & credit of business transactions affecting the balance sheet.	4. Analyze "T" account transactions indicating increases and decreases of the accounts.
	4.1 Define terms.
	4.2 Label "T" accounts as to increase, decrease, and balance side.
5. Debit & credit of income and expense transactions.	5. Post income and expense transactions to "T" accounts to indicate increases and decreases of the accounts.
	5.1 Define terms.
	5.2 Label "T" expense and income accounts as to increase, decrease, and balance side.
6. Journalizing business transactions.	6. Journalize asset, liability, capital, income, and expense transactions for one month.
	6.1 Define terms.
	6.2 Prove the equality of the debits and credits.
	6.3 Prove cash.

7. Posting.	7. Post the proper amounts of one month's transactions in a cash journal to the proper ledger accounts.
	7.1 List the divisions of the ledger.
	7.2 Post to the ledger.
8. Proving the accuracy of the posting.	8. Foot the cash account, prove cash, foot each account in the ledger, find its balance, and take a trial balance of a completed month's ledger.
	8.1 Figure and record the cash balance.
	8.2 Define trial balance.
	8.3 Prepare a trial balance.
9. Worksheet.	9. Prepare a six-column worksheet.
	9.1 Define terms.
	9.2 Prepare the worksheet.
10. The income statement and balance sheet.	10. Prepare an income statement and balance sheet.
	10.1 Define terms.
	10.2 Prepare an income statement.
	10.3 Prepare a balance sheet.

11. Closing the ledger and preparing the post-closing trial balance.	11. Close out the ledger and take a post-closing trial balance. 11.1 Define terms.
12. Opening a checking account.	12. Complete the forms necessary for opening a checking account. 12.1 Sign the signature card. 12.2 Fill out a deposit slip. 12.3 Record the deposit in the checkbook. 12.4 Endorse a check.
13. Writing checks.	13. Complete the check stub; write a check; and void a check. 13.1 Fill out the check stub. 13.2 Write a check. 13.3 Void a check.
14. Reconciling a bank statement.	14. Reconcile a bank statement and make the related journal entries. 14.1 Check the bank statement for errors. 14.2 Prepare a list of outstanding checks. 14.3 Prepare the bank reconciliation statement. 14.4 Record the bank charges.

14.5 Make the related journal entries.

15. Journalizing transactions of a merchandising business.

15. Record the cash balance on hand, a purchase of merchandise for cash, a purchase of merchandise on acount, a cash sale, a sale on account, a cash payment of an expense, a purchase of supplies on account, a cash withdrawal, and make a correcting entry, and total and rule the journal.

15.1 Record the cash balance on hand.

15.2 Record a purchase of merchandise for cash.

15.3 Record a purchase of merchandise on account.

15.4 Record a cash payment on account.

15.5 Record cash sales.

15.6 Record a sale on account.

15.7 Record a receipt of cash on account.

15.8 Record a cash payment of an expense.

15.9 Record a purchase of supplies on account.

15.10 Record a cash withdrawal.

15.11 Record a correcting entry.

15.12 Total and prove the combination journal.

16. Posting to ledgers of a merchandising business.

16. Post, prove the subsidiary ledgers and the general ledger through a trial balance.

16.1 Open an accounts receivable ledger for a charger customer.

16.2 Open an accounts payable ledger for a creditor.

16.3 Post a debit to the accounts payable ledger.

16.4 Post a credit to the accounts payable ledger.

16.5 Post a debit to the accounts receivable ledger.

16.6 Post a credit to the accounts receivable ledger.

16.7 Post debits to accounts in the general ledger.

16.8 Post credits to accounts in the general ledger.

16.9 Post the totals of the special columns to the general ledger.

16.10 Prove the subsidiary ledgers.

16.11 Prove equality of the debits and credits in the general ledger.

17. The 8-column worksheet with adjustments.

17. Prepare an 8-column worksheet with adjustments, and determine the net income or (net loss).

17.1 Prepare the heading.

17.2 Record the trial balance.

17.3 Record the adjustment for the beginning merchandise inventory.

17.4 Record the adjustment for the ending merchandising inventory.

17.5 Record the ajdustment for supplies account.

17.6 Record the adjustment for prepaid insurance account.

17.7 Extend the balance sheet amounts to the balance sheet section.

17.8 Extend the income and expense amounts to the income statement section.

17.9 Total the income statment and balance sheet columns of the 8-column worksheet.

17.10 Figure and record the net income or (net loss).

17.11 Extend the net income (or net loss) to the balance sheet section and rule the worksheet.

18. Financial statements.	18.	Prepare an income statement and a balance sheet.
	18.1	Prepare the income statement heading.
	18.2	Prepare the income section of the income statement.
	18.3	Prepare the cost of merchandise sold section of the income statement.
	18.4	Prepare the expense section of the income statement.
	18.5	Figure the net income (or net loss) on the income statement.
	18.6	Prepare the balance sheet heading.
	18.7	Prepare the asset section of the balance sheet.
	18.8	Prepare the liabilities section of the balance sheet.
	18.9	Prepare the capital section of the balance sheet.
	18.10	Prove and rule the balance sheet.
19. Adjusting and closing entries.	19.	Record adjusting entries from the worksheet and record the closing entries for income and expense accounts.
	19.1	Prepare the adjusting entry for the beginning merchandise inventory.

Adjusting and closing entries cont'd.

19.2 Prepare the adjusting entry for the ending merchandise inventory.

19.3 Prepare the adjusting entry for prepaid insurance that has expired.

19.4 Prepare the adjusting entry for supplies used.

19.5 Prepare closing entries for all accounts with credit balances.

19.6 Prepare the closing entries for all accounts with debit balances.

19.7 Prepare closing entry to close income and expense summary account.

20. Closing the general ledger and preparing a post-closing trial balance.

20. Close, record the new balances for those accounts not closed, rule, and prepare a post-closing trial balance.

20.1 Close the income and expense accounts.

20.2 Rule and record the new balances for the assets, liabilities, and capital accounts.

20.3 Prepare the heading for the post-closing trial balance.

20.4 Complete the post-closing trial balance.

20.5 Total and rule the post-closing trial balance.

21. Payroll records.

21. Complete a withholding exemption certificate, an application for a social security number, an employee's time card, a payroll register, and an employee earnings record.

    21.1 Complete a withholding exemption certificate.

    21.2 Complete an application for a social security number.

    21.3 Complete an employee time card.

    21.4 Complete a payroll register.

    21.5 Fill out the employee information section of an employee's earnings record.

    21.6 Prepare an employee's earnings record.

22. Payroll accounts.

22. Analyze payroll accounts in the payroll register and identify employer's taxes.

    22.1 Analyze the debits of a payroll register.

    22.2 Analyze the credits of the payroll register.

    22.3 Identify the employer's payroll taxes.

23. Payroll taxes and withholding taxes.

23. Journalize the payroll entry, compute and record the employer's payroll taxes, and post these entries.

    23.1 Journalize the payroll entry.

Payroll taxes and withholding taxes cont'd.	23.2 Compute the payroll taxes. 23.3 Record the employer's payroll tax. 23.4 Post the payroll entry and the employer's payroll taxes.
24. Paying the payroll taxes and withholding taxes.	24. Pay the withholding and payroll taxes, both employee's and employer's portion, to the proper agency and record these payments to the proper journals and post to the specific accounts. 24.1 Pay and record liability for employee's income tax and FICA tax. 24.2 Pay and record the liability for federal unemployment tax. 24.3 Pay and record the liability for state unemployment tax. 24.4 Post the withholding and the payroll taxes.
25. Payroll reports.	25. Satisfactorily prepare the employer's payroll tax reports. 25.1 Prepare the Form W-2 wage and tax statement. 25.2 Prepare the employer's quarterly federal tax return. 25.3 Prepare a reconciliation of income tax withheld and transmittal of tax statements, form W-3.

26. Purchases journal.	26. Journalize transactions in a purchases journal and post these figures and other pertinent information to the subsidiary and controlling ledgers. 26.1 Identify the terminology involved in the use of a purchases journal. 26.2 Journalize a purchase of memrchandise on account. 26.3 Post from the purchases journal and general journal to the controlling and subsidiary ledgers.
27. Cash payments journal.	27. Correctly journalize the transactions in a cash payments journal and post these figures to the subsidiary and controlling ledgers. 27.1 Identify the terminology involved in the use of a cash payments journal. 27.2 Journalize the payment transaction, with and/or without trade discount in a cash payments journal. 27.3 Post from the cash payments journal to the controlling and subsidiary ledgers.
28. Sales journal.	28. Journalize the transactions in a sales journal and post the necessary information to the controlling and subsidiary ledgers. 28.1 Identify the terminology invovled in the use of a sales journal.

Sales journal cont'd.	28.2 Journalize a sale of merchandising on account.
	28.3 Post from the sales journal and general journal to the controlling and subsidiary ledgers.
29. Cash receipts journal.	29. Correctly journalize the transactions in a cash receipts journal and post these figures to the controlling and subsidiary ledgers.
	29.1 Identify terminology involved in the use of a cash receipts journal.
	29.2 Journalize the receipts of a cash transaction with and without a sales discount.
	29.3 Post from the cash receipts journal to the controlling and subsidiary ledgers.
30. General Journal.	30. Journalize transactions that should be entered in a general journal and post these figures and other pertinent information to the ledgers.
	30.1 Journalize a purchase return and allowance transaction.
	30.2 Journalize the buying of supplies account.
	30.3 Journalize the withdrawing of merchandise.
	30.4 Journalize a sales return and allowance transaction.

	30.5 Post the four-column general journal.
31. Cash Register System.	31. Operate a cash register, fill out the cash proof and balance slip, and record into appropriate journals.
	31.1 Analyze the cash register.
	31.2 Record transactions on a cash register.
	31.3 Complete the cash proof and balance slip.
	31.4 Record cash short and over.
	31.5 Record data from the cash proof and balances slip in the cash receipts-sales journal.
32. Petty Cash.	32. Establish and replenish a petty cash fund.
	32.1 Establish and prove the petty cash fund.
	32.2 Replenish a petty cash fund.
33. Cash Sales.	33. Journalize and post transactions involving cash sales with sales tax and cash receipts on account with sales tax.
	33.1 Journalize cash sales with sales tax.
	33.2 Journalize cash receipts on account with sales tax.
	33.3 Post cash sale with sales tax.

	33.4 Post cash receipts on account with sales tax.
34. Charge Sales.	34. Journalize and post transactions involving charge sales with sales tax. 34.1 Journalize charge sales with sales tax. 34.2 Post charge sales with sales tax.
35. Paying Sales Tax to the Government.	35. Journalize and post transactions involving payments of sales tax to the government. 35.1 Journalize payments of sales tax to the government. 35.2 Post payments of sales tax to the government.
36. Sales Returns and Allowances.	36. Journlize and post transactions involving sales returns and allowances with sales tax. 36.1 Journalize sales returns and allowances with sales tax. 36.2 Post sales returns and allowances with sales tax.
37. Establishing Allowance for Bad Debts and Evaluating Accounts Receivable.	37. Establish an allowance for bad debts account, determine the book value of accounts receivable, credit the amount of estimated bad debts on the worksheet, record the adusting entry, post the adjusting entry, and report this amount as a deduction of accounts receivable on the balance sheet.

Establishing Allowance for Bad Debts and Evaluating Accounts Receivable cont'd.

37.1 Figure the estimated amount of accounts receivable.

37.2 Determine the book value of accounts receivable.

37.3 Establish an allowance for bad debts account.

37.4 Enter the adjusting entry for allowance for bad debts account.

37.5 Record the adjusting entry.

37.6 Post the adjusting entry.

37.7 Report the amount of bad debts.

38. Bad Debts Expense.

38. Establish a bad debts expense account, make the adjustment for estimated bad debts on the worksheet, record the adjusting entry in the general journal, post the adjustment for estimated bad debts in the appropriate ledger accounts, and report this account in the operating expense section of the income statement.

38.1 Establish a bad debts expense account.

38.2 Record the adjusting entry.

38.3 Post the adjusting entry.

38.4 Report the amount of bad debts.

39. Depreciation of Plant Assets.	39. Compute the depreciation of a plant asset. 39.1 Figure depreciation of a plant asset.
40. Valuation of Plant Assets.	40. Determine the value of a plant asset. 40.1 Figure the valuation of plant assets.
41. Adjustments for Depreciation.	41. Record adjustments for depreciation. 41.1 Record depreciation on a worksheet. 41.2 Record depreciation in the general journal (combination journal). 41.3 Post adjusting entry for depreciation from the general journal (combination journal) to the ledger account.
42. Reporting.	42. Report depreciation expense and its effect on a plant asset. 42.1 Record depreciation expense of a plant asset on the income statement. 42.2 Record accumlated depreciation on the balance sheet.
43. Disposition.	43. Record the disposition of plant assets by (1) selling--reporting loss or gain, (2) discarding--reporting loss, if any, (3) trading--reporting acquisition of new asset and disposal of old asset. 43.1 Sell a plant asset.

Disposition cont'd.	43.2 Discard a plant asset. 43.3 Trade a plant asset.
44. Interest on Notes.	44. Acquire the terminology, compute the interest, and determine the due date of interest on notes. 44.1 Identify the terms involving notes. 44.2 Figure the due date. 44.3 Compute interest on notes for one year. 44.4 Compute interest on notes for less than a year. 44.5 Compute interest on notes with time stated in days.
45. Recording Notes Payable.	45. Record transactions involving notes payable. 45.1 Record a note payable. 45.2 Record the payment of notes payable. 45.3 Record a note payable for an extension of time. 45.4 Record a note payable that is discounted.
46. Recording Notes Receivable.	46. Record transactions involving notes receivable. 46.1 Record the receipt of a note receivable from a customer.

Recording Notes Receivable cont'd.	46.2 Record the collection of a note receivable and the interest.
	46.3 Record the dishonoring of a note.
47. Reporting Results of Notes Transactions on Financial Statements	47. Report the notes and interest accounts in the appropriate section(s) of the financial statements.
	47.1 Report notes receivable and notes payable on the balance sheet.
	47.2 Report interest income and interest expense accounts on the income statement.
48. Recording Accrued Income.	48. Journalize and post accrued income transactions.
	48.1 Record accrued interest income.
	48.2 Record the reversing entry for accrued interest income.
49. Reporting Accruals on Financial Statements.	49. Analyze and report accrued accounts on the appropriate financial statements.
	49.1 Report the interest receivable and interest income on financial statements.
	49.2 Report the accrued expenses on financial statements.
50. Partnerships.	50. Identify parts of "Articles of Partnership," journalize a partnership opening entry, figure the distribution of earnings, prepare financial statements, and journalize adjusting and closing entries.

Partnerships cont'd.	50.1 Form a partnership.
	50.2 Record the opening entry for a partnership.
	50.3 Figure partners' salaries (distributing income).
	50.4 Prepare financial statements for partnerships.
	50.5 Record the adjusting and closing entries for a partnership.
51. Corporations.	51. Identify sections of "Articles of Incorporation," journalize a corporation opening entry, record the issuing of capital stock after incorporation, prepare financial statements, and record the entry for declaring and distribute a stock dividend.
	51.1 Form a corporation.
	51.2 Open entries for corporations.
	51.3 Record the issuing of capital stock after incorporation.
	51.4 Complete financial statements of a corporation.
	51.5 Distribute income as dividends to stockholders.
52. Data Processing Systems.	52. Prepare (1) a chart of accounts set-up form for the general ledger, (2) a chart of accounts set-up form for a subsidiary ledger, (3) add new accounts to the general ledger, and (4) add new accounts to the subsidiary ledger.

Data Processing Systems cont'd.

52.1 Define data processing systems.

52.2 Identify examples of input and output.

52.3 Prepare a chart of accounts set-up form for a general ledger.

52.4 Prepare a chart of accounts set-up form for a subsidiary ledger.

52.5 Add new accounts to the general ledger.

52.6 Add new accounts to the subsidiary ledger.

53. Automated Accounting Systems.

53. (a) Analyze and read punched cards, (b) record the opening entry in an automated system, (c) analyze the completed journal entry transmittal, (d) prepare a systems flow chart, (e) journalize transactions using a journal entry transmittal, and (f) record the adjusting entries using a journal entry transmittal.

53.1 Analyze punched cards.

53.2 Read punched cards.

53.3 Record the opening entry.

53.4 Analyze the completed journal entry transmittal.

53.5 Prepare a systems flow chart.

Automated accounting systems cont'd..

53.6 Journalize transactions using a journal entry transmittal.

53.7 Record the adjusting entries using a journal entry transmittal.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0104 Machine Billing, Bookkeeping and Computing
Office Machines

07.0104 Machine Billing, Bookkeeping, and Computing -- an instructional program that prepares individuals to utilize office machines for billing, posting, calculating, adding, listing, and mechanizing data (except data processing equipment); obtain final records of financial activities; and prepare other financial statistical reports and information.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Interpersonal skills.	1. Demonstrate how to set goals and make decisions.
	1.1 Determine and revise as needed personal performance goals for the school year.
	1.2 Maintain a record of progress (personal profile) toward established goals.
	1.3 Conduct self-evaluations periodically.
	1.4 Exhibit the attitudes and work habits necessary for good interpersonal and employee/employer relations including self-discipline, self-evaluation, attendance and punctuality, and acceptance of responsibility.
	1.5 Describe personality traits/characteristics for selected office careers.

1.6 Identify and describe job titles and responsibilities from related areas.

1.7 Identify individual career goals.

1.8 Establish short- and long-range goals for professional growth.

1.9 Discuss office attire as it relates to dress code and place of employment.

1.10 Discuss the environment (work station), i.e., walls, lighting, location, and temperature.

2. Micro computers.

2. Demonstrate micro computer knowledge and skills at the operational level

2.1 Operate the alphanumeric keyboard.

2.2 Identify special key functions on microcomputers.

2.3 Identify key locations on the ten-keypad by using the touch method.

2.4 Proofread, correct errors, and make editorial changes.

2.5 Save, retrieve, and update data file.

2.6 Operate printer, load paper, and print data at the operational level.

2.7 Produce mailable business letters.

3. Adding-listing machines.	3. Operate an adding-listing machine in solving addition, subtraction, multiplication, and division problems. 3.1 Add and subtract on a 10-key adding-listing machine. 3.2 Multiply on a 10-key adding-listing machine. 3.3 Divide on a 10-key adding-listing machine.
4. Calculating machines.	4. Operate a calculating machine in solving basic addition, subtraction, multiplication, and division problems; and when the machine capability is present, be able to multiply and divide using a constant. 4.1 Add and subtract on a calculating machine. 4.2 Multiply on a calculating machine. 4.3 Divide on a calculating machine. 4.4 Multiply and divide using constants on a calculating machine.
5. Miscellaneous duplicating equipment.	5. Demonstrate the knowledge and skills necessary to operate miscellaneous duplicating equipment. 5.1 Prepare a typewriter for typing on a fluid master unit.

Miscellaneous duplicating equipment cont'd.	5.2 Prepare a master unit for running on a fluid duplicator. 5.3 Correct errors on a master unit. 5.4 Select paper for running copies on a fluid duplicator. 5.5 Produce copies of a master unit on a fluid duplicator. 5.6 Produce copies on a photocopier. 5.7 Prepare a stencil on an electronic stencil maker. 5.8 Produce copies on an offset duplicator. 5.9 Produce copies on an automatic typewriter. 5.10 Select proper copying process for producing copies.
6. Dictating-Transcribing Machines	6. Operate available dictating-transcribing machines to produce materials in mailable form. 6.1 Produce copies in mailable using a dictating-transcribing machine. 6.2 Dictate materials into a dictating-transcribing machine

7. Specialized Typewriters	7. Operate electronic and/or specialized typewriters to produce copies in mailable form 7.1 Operate electronic/specialized typewriters
8. Leadership Training	8. Develop attributes essential to the successful operation of an organization. 8.1 Organize and plan a program of work. 8.2 Recognize the need for a line of authority and carry out responsibilities. 8.3 Apply human relation skills in the organization. 8.4 Solve problems using a decision-making process. 8.5 Apply the principles of parliamentary procedure. 8.6 Prepare and deliver an effective public speech. 8.7 Describe the need for evaluation processes with a variety of management techniques.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0302 Data Entry

07.0302 Business Computer and Console Operation (Data Entry) -- an instructional program that prepares individuals to operate electronic data processing computers. Includes instruction in the review of program instructions, determination of procedures for a specific run, readying equipment for operation, and manipulation and monitoring of controls during operation. Instruction also is given in troubleshooting and all types of on- and off-line operations.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Origins of word and information processing.	1. Evolution of information processing and word processing. 1.1 Review data processing terminology and the data processing cycle. 1.2 Explain the differences in manual, mechanical, unit record, and electronic data processing. 1.3 Discuss the effects of the computer on businesses and information processing.
2. Data entry.	2. Demonstrate an ability to key data from source documents. 2.1 Explain the relationship between a source document and the entry record. 2.2 Key data from source documents. 2.3 Verify keyed input for accuracy. 2.4 Use appropriate programs to correct errors made in data entry.

3. Business applications - financial.	3.	Demonstrate ability to apply skills in processing transactions in major areas of business and industrial financial reporting.
	3.1	Describe the principles and procedures of a computerized inventory system.
	3.2	Identify the components, principles and procedures of a computerized inventory system.
	3.3	Identify the components, principles and procedures of a computerized accounts payable system.
	3.4	Identify the components, principles and procedures of a computerized accounts receivable system.
	3.5	Identify and describe the various points-of-sale terminals and their functions.
4. Business applications - word processing.	4.	Demonstrate ability to apply skills in word processing applications.
	4.1	Describe the flow of the information processing cycle.
	4.2	Identify components of electronic typewriter and computerized word processors.

	4.3 Enter, modify and output various types of business communications via word processor.
5. Employment skills.	5. Demonstrate pre-employment skills needed to get and maintain a job.
	5.1 Follow oral and written instructions for job tasks.
	5.2 Explain the educational background, personal qualities, and work experience needed for various positions associated with data entry.
	5.3 Function cooperatively with fellow workers and supervisors.
	5.4 Demonstrate acceptable interviewing skills for consideration as a data entry operator.
6. Vocational student organization membership.	6.1 Identify the advantages of participating in Vocational student organizations.
	6.2 Participate as a member of a Vocational student organization.
7. Development of leadership skills through VSO and related activities.	7.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0305 Business Data Processing I

07.0305 Business Data Processing -- an instructional program that prepares individuals to convert problems into detailed flow charts; code into computer language; test, monitor, debug, document, and maintain computer programs; and design programs for specific uses and machines.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Accounting.	1. Apply accounting terms and accounting principles correctly as they occur in oral or written work effecting accounting procedures of a business.
	1.1 Define specific accounting terms, i.e., asset, liability, capital, debit, credit, journals, source documents, and double-entry accounting.
	1.2 Classify items as assets, liabilities or capital.
	1.3 Prepare a beginning balance sheet.
	1.4 Record and post the opening entry.
	1.5 Debit and credit accounts for transactions involving increases and decreases to the accounts.
	1.6 Journalize business transactions for a period of one month.
	1.7 Foot and prove the equality of debits and credits in one set of journals.

1.8 Prove cash.

1.9 Prepare a trial balance to prove equality of debits and credits posted to ledger accounts.

1.10 Prepare a trial balance to prove equality of debits and credits posted to ledger accounts.

1.11 Prepare income statements from trial balances.

1.12 Prepare balance sheets from trial balances.

2. Automated Accounting.

2. Demonstrate ability to format, analyze, code, andrecord business transactions.

2.1 Determine fields to be included on the transaction record.

2.2 Interpret the use of the fields on the transaction record.

2.3 Determine fields to be included on the account balance record.

2.4 Interpret the use of fields on the account balance record.

2.5 Record on punched cards or magnetic media account balances and transactions records.

2.6 Use prepared computer programs, edit account balances and transaction records for a fiscal period.

2.7 Use computer programs and documentation to produce journals/registers for a fiscal period.

2.8 Prove the accuracy of journals/registers by comparing column totals to transaction batch totals.

2.9 Prove cash by comparing journal register totals to actual cash balance.

2.10 Use computer program and documentation to prepare a posting report for a fiscal period.

2.11 Create an updated account balance record for a fiscal period.

2.12 Use updated account balance records, computer program, and documentation, prepare a trial balance for a fiscal period.

2.13 Using a computer program, documentation, and account balance records, produce an income statement for a fiscal period.

2.14 Using a computer program, documentation, and account balance records, produce a balance sheet.

3. Business calculations.

3. Demonstrate ability to perform arithmetic operations on a ten-key machine with touch operation.
    - 3.1 Perform the basic arithmetical processes of addition, subtraction, multiplication, and division.
    - 3.2 Operate a ten-key calculating machines by touch.
    - 3.3 Perform addition, subtraction, multiplication, and division on a calculator.

4. Business Systems.

4. Demonstrate ability to construct a flow chart for business transactions.
    - 4.1 Identify the procedures in the development of a data processing system.
    - 4.2 Construct a business systems flow chart using correct symbols.
    - 4.3 Complete and verify payroll for five employees when given time cards, payroll register, and individual employees earnings records.

5. Data processing.

5. Review fundamental knowledge of business data processing systems.
    - 5.1 Define typical data processing terms.

5.2 Identify sequencial steps in data processing operations.

5.3 Identify devices that are used for mechanically processing data.

5.4 Identify devices that are used for electronically processing data.

5.5 Identify the components of an electronic data processing system.

5.6 Compare the major hardware advancement of each computer generation.

5.7 Differentiate between uses of digital and analog computers.

5.8 Compare advantages and disadvantages of processing data by computer and by other methods.

5.9 Define hardware.

5.10 Identify computer input devices.

5.11 Identify computer storage devices.

5.12 Identify computer output devices.

5.13 Identify the three parts of the central processing unit and explain the functions of each.

5.14 Define software.

5.15 Describe functions of the computer operating system.

5.16 Describe functions of compilers, assemblers, and interpreters.

5.17 Describe the functions of utility and application programs.

5.18 Describe COBOL, RPG, and BASIC programming languages.

5.19 Explain coding as it relates to the development of a program.

5.20 Define testing and debugging.

5.21 Explain the importance of documentation.

5.22 Define types of primary and secondary storage.

5.23 Define binary, decimal, octal, and hexa-decimal numbering systems.

5.24 Convert numbers in one numbering system--binary, decimal, hexadecimal, or octal--to numbers in other systems.

5.25 Convert human-readable data to machine-readable data using the Hollerith code.

6. Programming concepts.

6. Review and further develop concepts of programming.

6.1 Describe the steps for preparing a program.

6.2 Describe the steps needed to solve a problem.

6.3 Describe other problem-solving tools including algorithms, input-processing-output charts, and pseudo-coding.

6.4 Interpret the Binary Coded Decimal (BCD) representation.

6.5 Interpret the Extended Binary Coded Decimal Interchange Code and the American Standard Code for Information Interchange data representations.

6.6 Identify symbols and rules for flow charting.

6.7 Code from a logic sequence an application program using a high-level computer language.

6.8 Test the validity of an application program given appropriate test data.

6.9 Compile or interpret source programs.

	6.10 Correct syntax errors from compilation or interpretation listings. 6.11 Verify text output data with program specifications for compliance. 6.12 Write document narratives. 6.13 Prepare operator's run sheets. 6.14 Prepare data control instructional worksheets.
7. Basic, a review.	7. Review and refresh concepts of BASIC programming. 7.1 Describe the functions of common BASIC statements. 7.2 Identify correctly written BASIC statements. 7.3 Use BASIC statements to code programs to input and list data in report form. 7.4 Code and run a BASIC program that will perform calculations on given data. 7.5 Code and run a program using appropriate statements to compare sets of data.
8. Advanced basic.	8. Develop an ability to write and code programs using advanced concepts of BASIC. 8.1 Use BASIC statements to code programs to produce single-level tables.

8.2 Use BASIC statements to code programs to produce minor, intermediate, and final totals.

8.3 Use BASIC statements to code programs to read and process data from sequential disk files.

8.4 Use BASIC statements to read and process data from random access disk files.

9. Leadership training.

9. Develop attributes essential to the successful operation of an organization.

9.1 Organize and plan a program of work.

9.2 Recognize the need for a line of authority and carry out responsibilities.

9.3 Apply human relations skills in the organization.

9.4 Solve problems using a decision making process.

9.5 Apply the principles of parliamentary procedure in a meeting situation.

9.6 Prepare and deliver an effective public speech.

9.7 Describe the need for evaluation processes with a variety of management techniques.

10. Organization.	10. Recognize the responsibilities of a leader and the importance of cooperation in a group setting.

10.1 Explain the purposes and goals of a national student organization.

10.2 Describe the structure of the organization.

10.3 Conduct a local election and describe officer duties.

10.4 Explain the functions of an Advisory Council.

10.5 Identify the resource publications for a national student organization.

10.6 Identify local public relations techniques.

10.7 Identify committee needs and understand committee purposes.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0305 Business Data Processing II

07.0305 Business Data Processing -- an instructional program that prepares individuals to convert problems into detailed flow charts; code into computer language; test, monitor, debug, document, and maintain computer programs; and design programs for specific uses and machines.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Computer classifications and hardware.	1. Develop a knowledge of computer hardware and it's classification. 1.1 Describe how an analog computer works. 1.2 Describe how a digital computer works. 1.3 Describe the characteristics of a hybrid computer. 1.4 Differentiate between general purpose and special purpose computers. 1.5 Distinguish between computers based on size. 1.6 Explain the basic hardware components of a computer.
2. Evolution, use and impact of computers.	2. Develop a knowledge of the historical factors affecting the development of computer hardware and software. 2.1 Describe the contributions of Charles Babbage to the modern computer.

2.2 Discuss the significance of Mark I, ENIAC, EDVAC/EDSAC, UNIVAC, AND IBM360.

2.3 Relate the development of computer software to the hardware generations.

2.4 Identify major manufacturers of large scale computer hardware.

2.5 Identify companies that specialize in mini-computers.

2.6 Identify major manufacturers of microcomputers.

2.7 Discuss major computer applications used by governments.

2.8 Discuss the use of computers in the management of business and banking.

2.9 Discuss the use of computers in industries such as petroleum, automobiles, manufacturing, and research.

2.10 Describe the uses of the computer in the home.

2.11 Explain how computers affect society in relation to energy, medicine, law enforcement, retailing, education, and transportation.

2.12 Explain common misconceptions and myths about the computer.

	2.13	Discuss the use of computers and the Privacy Act of 1974.
3. Secondary storage.	3.	Demonstrate a knowledge of secondary storage media.
	3.1	Describe the use of magnetic tape as a secondary storage media.
	3.2	Describe the use of magnetic disks as a secondary storage media.
4. Computer operations.	4.	Demonstrate a knowledge of how to operate a computer.
	4.1	Power up and down computer, I/O devices, etc., for daily operations.
	4.2	Prepare peripheral devices for specific jobs.
	4.3	Operate, monitor, and control the computer and its peripheral equipment.
	4.4	Prepare computer for processing specific types of jobs.
	4.5	Perform basic housekeeping functions.
	4.6	Describe the purpose of data management software.
	4.7	Describe the purpose of utility software.
	4.8	Explain the function of a computer operating system.

	4.9	Discuss characteristics of RPG, COBOL, Assembler, BASIC, and FORTRAN.
	4.10	Discuss additional programming languages.
5. Data communications.	5.	Explore the relationships between computing and communications.
	5.1	Describe the techniques and channels used to transmit data.
	5.2	Identify the types of organizations that provide channels and/or services for business and industry.
	5.3	Outline components used to coordinate a complex computing/communications network.
	5.4	Give specific examples of systems supported by data communications.
	5.5	Describe the characteristics of distributed data processing.
6. Cobol.	6.	Demonstrate an ability to develop, code and run a COBOL program.
	6.1	Explain the structure and syntax of a simple COBOL program.
	6.2	Explain the structured programming approach to constructing a program.
	6.3	Develop, code and run a simple listing program

6.4 Develop, code and run a program containing arithmetic statements and several common numeric editing functions.

6.5 Use COMPUTE statements in a COBOL program.

6.6 Code and run a program using appropriate statements to compare sets of data.

6.7 Code and run a program using nested IF's for comparisons.

6.8 Code and run a program with heading and paging routines.

6.9 Code and run a COBOL program using control-breaks to produce intermediate and final results.

6.10 Develop, code and run a program with a single-level table using indexing.

6.11 Develop, code and run a program with a single-level table using subscripts.

7. RPG.

7. Demonstrate the ability to develop, code and run a program in RPG.

7.1 Compare RPG programming to other common business programming languages.

7.2 Write and run an RPG program to provide a simple listing.

7.3 Write and run an RPG program to create a report using headings.

7.4 Write and run an RPG program using basic calculation statements.

7.5 Write and run an RPG program using compare statements.

7.6 Write and run an RPG program to create a final total line on a report.

7.7 Compare sequential and random file organization.

7.8 Write and run an RPG program to calculate and print minor, intermediate and final totals.

7.9 Write and run a RPG program to check a file for ascending/descending and/or a particular order of records.

7.10 Write and run a RPG program that uses a single-level table.

8. Leadership training.

8. Develop attributes essential to the successful operation of an organization.

8.1 Organize and plan a programof work.

8.2 Recognize the need for a line of authority and carry out responsibilities.

	8.3 Apply human relation skills in the organization.
	8.4 Solve problems using a decision-making process.
	8.5 Apply the principles of parliamentary procedures.
	8.6 Prepare and deliver an effective public speech.
	8.7 Describe the need for evaluation processes with a variety of management techniques.
9. School/community involvement.	9. Demonstrate effective citizenship though services to others.
	9.1 Understand the goals of the organization; identify the community to be served by the project; determine an appropriate service project; organize and plan the project; work well with others; evaluate the success of the project.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0399 Computer Literacy/Introduction to Data Processing

07.0399 Business Data Processing and Related Programs, Other (Computer Literacy/Introduction to Data Processing -- any instructional program in business data processing and related programs not described.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Introduction.	1. Describe the importance of data to the efficient operation to government, business.
	1.1 Identify a basic data need of business and industry and of government.
	1.2 Discuss the steps in the data processing cycle and explain each step.
	1.3 Distinguish among data processing systems.
	1.4 Identify mechanical data processing devices, components of electronic data processing, and describe the functions of each.
	1.5 Describe unique characteristics and importance of each computer generation.
2. Computer overview.	2. Describe types, capabilities, and functions of computer hardware.
	2.1 Differentiate between uses of digital and analog computers.
	2.2 Identify and explain the function of the basic components of a typical computer system.

	2.3	Explain the functions of the central processing unit.
	2.4	Categorize a list of software according to function.
	2.5	Describe popular programming languages.
	2.6	Define and give examples of primary and secondary storage.
3. Input/output devices.	3.	Summarize the functions of input and output devices.
	3.1	Describe the general functions and attributes of the following I/O devices: printer, card reader, card punch, magnetic tape, magnetic disks, paper tape, CRT, keyboard, teletypewriter.
	3.2	Describe the general functions and attributes of the following specialized I/O devices: optical character reader, optical mark reader, magnetic ink character recognition unit, light pen, audio response unit, point-of-sale transaction device, touch screen, touch pad, plotter, microfilm unit.
4. Business, society and computers.	4.	Explain the major users of computers and identify computerized applications in each.
	4.1	Identify major types of electronic data processing.

4.2 Discuss and define computerized applications in government.

4.3 Discuss the use of computers in management.

4.4 Discuss typical office systems that may be computerized.

4.5 Identify typical uses for computers in banks.

4.6 Given examples of the use of computers in the following industries: petroleum, automotive, manufacturing, research; discuss consumer use of computers in the home.

4.7 Given an example of computer use in each area: energy, medicine, law enforcement, retailing, education, transportation.

4.8 Explain common misconceptions and myths related to the computer.

4.9 Discuss the use of computers and the Privacy Act of 1974.

4.10 Discuss the impact increased use of computers will have on society.

5. Programming procedures.

5. Sequence steps in completing a program assignment, code, test, and prepare documentation for a program.

5.1 Describe the steps for preparing a program.

5.2 Describe the steps needed to solve a problem.

5.3 Write a documentation narrative.

5.4 Describe problem-solving tools including algorithms, input-processing-output charts, and pseudo-coding.

5.5 Develop a detailed flowchart for coding a program.

5.6 Code an application program and test logic errors.

6. Programming language: basic.

6. Demonstrate proficiency in developing, coding, and running a program in BASIC language.

6.1 Describe the functions of common BASIC statements.

6.2 Identify written BASIC statements.

6.3 Use systems commands at terminal.

6.4 Use BASIC statements to code programs to input and list data on reports.

6.5 Explain the hierarchy of operations.

6.6 Describe the arithmetic operators.

6.7 Use appropriate BASIC statements to code programs to perform addition, subtraction, multiplication, and division.

	6.8 Identify the logical operators.
	6.9 Identify the relational operators.
	6.10 Code statements using logical and relational operators.
	6.11 Code and run a BASIC program using one or more subroutines.
	6.12 Code and run a BASIC program using one or more computer-generated functions.
7. Vocational student organizations.	7. Recognize the responsibilities of a leader and the importance of cooperaction in a group setting.
	7.1 Explain the purposes and goals of a national student organization.
	7.2 Describe the structure of the organization.
	7.3 Conduct a local election and describe officer duties.
	7.4 Explain the functions of an Advisory Council.
	7.5 Identify the resource publications for a national student organization.
	7.6 Identify local public relations techniques.
	7.7 Identify committee needs and understand purposes.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0401 Business Principles and Management

07.0401 Office Supervision and Management -- an instructional program that prepares individuals to supervise employees; budget, analyze, and coordinate clerical and other office activities; evaluate, organize, and/or revise office operations and procedures to establish uniformity in handling correspondence, records, and other materials; design various office layouts to facilitate maximum production and efficiency; evaluate employee records; and coordinate activities of clerical department and workers.

Program Objective	Standard of Student Expectation
The Program will provide instruction in:	The Student will be expected to:
1. American Business.	1. Demonstrate knowledge of the American Business System and factors affecting business. 1.1 List characteristics of the American Business Systems. 1.2 Define selected economic terms. 1.3 Discuss the basic economic problem of unlimited wants versus limited resources. 1.4 Describe social problems that affect business. 1.5 Describe types and degree of government regulations that affect business. 1.6 Describe two current trends in business.
2. Business Ownership.	2. Replace the responsibilities, advantages and disadvantages of business ownership.

2.1 List the advantages and disadvantages of business ownership.

2.2 List sources of information for starting a business.

2.3 List local and state requirements for starting a business.

3. Management Functions.

3. Identify management functions essential to the successful operation of a business.

3.1 Demonstrate ability to develop an organizational chart.

3.2 Describe basic principles of good management.

3.3 Define the basic kinds of control.

3.4 List examples of effective leadership traits.

3.5 Describe basic guide for good communication.

4. Personnel.

4. Replace how selecting, training, promoting, transferring, and discharging of personnel affect the operation of a business.

4.1 State the importance for Personnel Policy Statements.

4.2 Discuss and justify the most advantageous wage and salary plan for the employer.

4.3 State the federal, state, or local legislation that would govern the employer-employee relations.

5. Finance.

5. Demonstrate knowledge of sources of capital funding for each type of business ownership and interpret appropriate accounting records or statements.

5.1 Identify sources of finance and determine how it is used in the operation of a business.

5.2 Identify accounting statements that provide business information.

5.3 Identify factors involved in selecting a bank to meet the needs of a business.

5.4 List the advantages and disadvantages of extending credit to businesses.

5.5 Explain why businesses need insurance.

6. Information Processing.

6. Describe the importance of selecting the most efficient and effective information processing methods.

6.1 Identify ways a business can increase efficiency through word processing.

	6.2	Identify ways a business can increase efficiency through data processing.
7. Marketing.	7.	Identify factors involved in producing goods and services and determine the most effective advertising procedures.
	7.1	Identify the marketing activities involved in buying, selling, transporting, storing, financing and risk taking.
	7.2	Describe the steps involved in ordering and receiving goods.
	7.3	Compute selling prices with markup based on either cost or selling price.
	7.4	Compute percent of markup or markdown.
	7.5	Explain effective and ineffective qualities of salespersons.
	7.6	Discuss the types of advertising.
8. Vocational student organization membership.	8.1	Identify the advantages of participating in Vocational student organizations.
	8.2	Participate as a member of a Vocational student organization.

9. Development of leadership skills through VSO and related activities.	9.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0501 Business Law

07.0501 Personnel and Training Programs, General (Business Law) -- an instructional program that generally prepares individuals to undertake organizational and facilitating functions associated with personnel adminstration.

Program Objective The Program will provide instruction in:	Standard of Student Expectation The Student will be expected to:
1. Understanding the Law.	1. Identify the basic legal rights and responsibilities as they apply to everyday roles of consumers, citizens, and workers.
	1.1 Identify the importance of law to society, the citizen, the minor, and the consumer.
	1.2 Differentiate between common law and Roman civil law.
	1.3 Define present-day forms of law.
2. Law and Court Proceedings.	2. Describe the law and court proceedings.
	2.1 Define criminal and civil law.
	2.2 Define crime and tort.
	2.3 Describe the function of the courts in the Federal, State, and local court sytems.
	2.4 Describe the manner in which a case proceeds through the courts.

3. Contracts.

3. Explain the purposes and uses of a variety of common legal documents.

   3.1 Define a contract.

   3.2 List the elements of a contract.

   3.3 Explain circumstances under which contract rights are assignable.

   3.4 Explain the meaning of a breach of contract.

   3.5 Identify remedies available for a breach of contract.

   3.6 Define the types of commercial paper.

   3.7 Identify the basic purpose of insurance.

   3.8 Discuss types of losses covered by insurance.

   3.9 Define special terminology related to insurance policies.

   3.10 Discuss the contractual requirements of an insurance policy.

   3.11 Compare insurance policies.

4. Property.	4. Describe property laws and how they effect the consumer.
	4.1 Define real and personal property.
	4.2 Discuss the characteristics of bailments.
	4.3 Distinguish between landlord and tenant.
	4.4 Identify rights and responsibilities of tenants.
	4.5 Discuss the characteristics of a lease.
	4.6 Define a will and related terms.
	4.7 Discuss the purpose for making a will.
	4.8 Identify the requirements of sales contracts.
5. Buying and Selling.	5. Identify laws relating to buying and selling goods.
	5.1 Discuss the difference between an actual sale and similar transactions such as bailments.

Buying and selling cont'd.	5.2	Identify the Statue of Frauds provisions for the sale of goods.
	5.3	Discuss transfer of ownership and risk of loss.
	5.4	Explain how product liability extends beyond the warranty.
	5.5	Identify the rights of the buyer.
6. Credit.	6.	Identify the legal implications of buying on credit.
	6.1	Discuss different means of making payment.
	6.2	Discuss advantages and disadvantages of using cash and credit.
	6.3	Identify forms of protection available to the consumer and the creditor.
7. Employment.	7.	Describe Federal and State laws as they affect employment.
	7.1	Identify the essentials of an employment contract.

Employment cont'd.

7.2 Discuss Federal and State laws related to employment.

7.3 Identify the difference between an agent and an ordinary employee.

8. Law in Action.

8. Identify basic legal rights and responsibilities as they apply to everyday roles of consumers, citizens, and workers.

8.1 Define law.

8.2 Trace the development of U.S. law from English common law and Roman civil law.

8.3 Describe the primary sources of law under the American legal system.

8.4 Differentiate between civil law and criminal law.

8.5 Distinguish between a crime and a tort.

8.6 Differentiate between the criminal justice system and the civil justice system.

8.7 Discuss the rights and responsibilities of high school students in public schools.

9. Vocational student organizations.

9. Explain the responsibilities of a leader and the importance of cooperation in a group setting.

  9.1 Explain the purposes and goals of a national student organization.

  9.2 Describe the organizational structure of the national student organization.

  9.3 Conduct a local election and describe officer duties.

  9.4 Explain the functions of an advisory council.

  9.5 List the resource publications for a national student organization.

  9.6 List local public-relations techniques.

  9.7 Discuss committee needs and purposes.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0501 Business Economics

07.0501 Personnel and Training Programs, General (Business Economics) -- an instructional program that generally prepares individuals to undertake organizational and facilitating functions associated with personnel adminstration.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Overview of American Economic System.	1. Demonstrate a basic knowledge of principles of the American economic system.
	1.1 Define selected economic terms.
	1.2 Explain the importance of studying economics.
	1.3 Discuss the basic problem of unlimited wants versus limited resources.
	1.4 Describe characteristics and goals of a free enterprise system.
2. Production.	2. Demonstrate a knowledge of the factors affecting the production of goods and services.
	2.1 Define economic goods and services.
	2.2 Identify and explain the function of the basic components of a typical computer system.
	2.3 Define utility and name the kinds of utilities.

3. Leadership training.	3. Demonstrate attributes essential to the successful operation of an organization. 3.1 Organize and plan a program of work. 3.2 Recognize the need for a line of authority and carry out responsibilities. 3.3 Apply human-relation skills in the organization. 3.4 Solve problems using a decision-making process. 3.5 Apply the principles of parliamentary procedure in a meeting situation. 3.6 Prepare and deliver an effective public speech. 3.7 Describe the need for evaluation processes with a variety of management techniques.
4. Price determination.	4. Identify factors affecting the price of goods and services. 4.1 Define marketing. 4.2 Explain the functions of marketing. 4.3 Explain the roles of individuals who provide marketing services.

Price determination cont'd.

4.4 Explain the relationships of types of business organizations to the ability of the organization to assemble, organize, and manage the factors of production.

4.5 Define price.

4.6 Explain the effect of prices on kinds and quantities of goods produced.

4.7 Define supply and demand.

4.8 List the differences between competitive and monopolistic markets.

4.9 Explain the rationale for monopolies in our economic system and why prices charged are regulated by government.

4.10 Define inflation.

4.11 Explain ways in which inflation can be controlled.

5. Money & Financial Institutions.

5. Demonstrate a knowledge of the monetary system and its influence on the economy.

5.1 Describe the advantages of money over the barter system.

5.2 Describe the influence of gold and silver on modern money markets.

Money & Financial Institutions cont'd.

5.3 Describe the effect banks have on our monetary system.

5.4 Describe the purposes of the Federal Reserve System.

5.5 Describe the organization of the Federal Reserve System.

5.6 Describe how the Federal Reserve System acts as a clearinghouse for checks.

5.7 Define the characteristics of: savings and loans, credit unions, and consumer finance companies.

5.8 Discuss relationships between the stock market and fluctuations of the economy.

5.9 Explain the effect of supply and demand on wages.

6. National Income.

6. Describe the functions of profit and performance indicators as they relate to economic growth.

6.1 Explain the function of profit in our economy.

6.2 Name the different kinds of unions.

6.3 Define selected economic terms.

	6.4 Describe the use of performance indicators in the measurement of economic growth.
	6.5 Describe business cycles.
	6.6 Discuss causes of expansion and contraction of the economy.
7. Government Finance.	7. Describe the sources of income and how they are used to finance federal government activities.
	7.1 Differentiate between government receipts and expenditures.
	7.2 Discuss advantages of a balanced budget.
	7.3 List reasons for increased federal government expenditures.
	7.4 Explain why governments borrow money.
	7.5 List the major purposes for which taxes have been used.
	7.6 List the arguments for and against: federal income taxes, state income taxes, real estate taxes, personal property taxes, and federal excise taxes.

8. Social Programs.	8. Demonstrate an understanding of how social programs are financed and expended. 8.1 Describe how social security benefits are financed. 8.2 Provide reasons for maintaining a fiscally sound social security system. 8.3 Explain how social security deficits affect our economy. 8.4 Explain how welfare is financed. 8.5 Describe the impact of welfare programs on our economy.
9. Organization.	9. Recognize the responsibilities of a leader and the importance of cooperation in a group setting. 9.1 Explain the purposes of a national student organization. 9.2 Describe the organizational structure of the organization. 9.3 Conduct a local election and describe officer duties. 9.4 Explain the functions of an Advisory Council.

9.5 Name the resource publications for a national student organization.

9.6 State local public relations techniques.

9.7 List committee needs and understand committee purposes.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0599 Personal and Training Programs, Other
Intensive Office Education

07.0599 Personal and Training Programs, Other (Intensive Office Education) -- an instructional program that prepares individuals to undertake organizational and facilitating functions associated iwth personnel administration.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Employment process.	1. Demonstrate the knowledge and skills necessary to acquire employment. 1.1 Identify job opening sources. 1.2 Compose and keyboard application letter. 1.3 List resume items. 1.4 Compose and keyboard a resume. 1.5 Identify the purposes of interviews. 1.6 Identify the steps in interview preparation. 1.7 Identify interview questions. 1.8 Identify purposes and types of interviews. 1.9 Identify qualities of an applicant.

Employment process cont'd.	1.10 Participate in an interview. 1.11 Identify vocational goals. 1.12 Determine and revise as needed personal performance goals for the school year. 1.13 Conduct self-evaluations periodically. 1.14 Maintain a record of progress (personal profile) toward established goals. 1.15 Identify personal job qualifications for various office positions. 1.16 Identify the duties, knowledges, skills, and personal traits needed for office positions. 1.17 Identify classifications of office workers. 1.18 Determine life style, goals, career preference, mental and/or physical aptitude and abilities. 1.19 Determine relationship between life styles, goals, and careers. 1.20 Plan career goals based on identified aptitudes, traits, interests, and abilities.
2. Grooming.	2. Recognize and project the qualities of grooming necessary to acquire and maintain employment.

Grooming cont'd.	2.1 Identify traits of proper grooming. 2.2 Identify mannerisms. 2.3 Display proper grooming for an interview. 2.4 Explain importance of proper grooming.
3. Data Processing.	3. Develop a functional knowledge of computers and their effects on society. 3.1 Arrange the steps in the data processing cycle in sequence. 3.2 Describe various ways in which source data are converted to machine readable medium. 3.3 Describe the need and use of computers in today's economy and society. 3.4 Describe the major components of the central processing unit of a computer system. 3.5 Explain how data is stored on the chip. 3.6 Describe how data is stored randomly or sequentially on the media. 3.7 Describe coding systems used in modern computers.

Data processing cont'd.

3.8 Determine how a common business application can be automated, i.e., accounts payable, payroll, inventory.

3.9 Demonstrate how to handle and care for software and hardware.

3.10 Analyze the duties, knowledge, skills, and traits needed for computer-related careers.

4. Keyboarding.

4. Demonstrate ability to operate an alphanumeric keyboard amd ten-key pad.

4.1 Operate the alphanumeric keyboard.

4.2 Start up and shut down the microcomputer.

4.3 Operate special function keys on the microcomputer.

4.4 Operate a printer, load paper, and print data.

5. Communications.

5. Demonstrate ability to apply basic oral and written communication skills.

5.1 Edit, input, and produce a short memo, letter, and report.

5.2 Compose simple business communications using correct grammar, letter-writing principles and all relevant information.

Communications cont'd.

5.3 Edit and input minutes of a meeting.

5.4 Spell and define business terms.

5.5 Demonstrate proper telephone manners.

5.6 Receive calls.

5.7 Transfer calls.

5.8 Place local and long distance calls.

5.9 Use telephone directory.

5.10 Take telephone messages.

5.11 Define special telephone services.

5.12 Demonstrate knowledge of time zones of United States.

5.13 Define domestic telegraph services.

5.14 Define international telegraph service.

5.15 Prepare telegraphic messages for sending.

5.16 Demonstrate knowledge of machines used in sending telegraphic messages.

5.17 Count chargeable words for domestic telegraph messages.

Communications cont'd.

5.18 Select telephone or telegraph.

5.19 Select appropriate telegraphic service.

5.20 Select appropriate telephone service.

5.21 Select modes of travel.

5.22 Select and list lodging information.

5.23 Type letters of reservation.

5.2 List information found in an itinerary.

5.25 Type an itinerary.

6. Financial records.

6. Describe the importance of accurate record-keeping and develop proficiency in processing financial records.

6.1 Identify financial services

6.2 Write checks and maintain a check register.

6.3 Determine appropriate endorsements.

6.4 Make deposits.

6.5 Reconcile bank statement.

Financial records cont'd.

6.6 Prepare petty cash vouchers, record petty cash transactions, and replenish the fund.

6.7 Record applicable information on requisitions, purchase orders, and invoices.

6.8 Prepare invoices, compute extension totals, applicable discounts, and sales tax.

6.9 Prepare payroll time cards.

6.10 Prepare payroll records from time cards.

7. Mail Processing

7. Demonstrate ability to process electronic mail and apply correct procedures in classifying mail.

7.1 Describe the classes of USA mail and special mailing services.

7.2 Select appropriate mail services in terms of importance, time factor, and cost.

7.3 Sort incoming mail and arrange in priority order for employees to handle.

7.4 Identify duties of an office worker in handling incoming and outgoing mail.

	7.5 Address envelopes using suggested format of the United Postal Service. 7.6 Prepare mailing lists. 7.7 Up-date mailing lists.
8. Word Processing.	8. Process business reports and correspondence on a dedicated word processor or a microcomputer. 8.1 Load a program into the microcomputer from a data disk or cassette. 8.02 Proofread, correct errors, and make editorial changes in data presented on video display. 8.3 Save, retrieve and update data
9. Records Management.	9. Demonstrate skill in files organization and management. 9.1 File materials in an alphabetic filing system. 9.2 File materials in a geographic filing system. 9.3 File materials in a numeric filing system. 9.4 File materials in a subject filing system.

Records management cont'd.	9.5 Compare the advantages and disadvantages of each filing system.
	9.6 Prepare cross-reference sheets.
	9.7 Inspect, index, code, sort, and arrange materials properly in folders.
	9.8 Retrieve materials or information from files and provide information in written form.
	9.9 Use proper procedures for charging out materials.
	9.10 Maintain a tickler file.
	9.11 Bring file folders up to date.
	9.12 Explain the advantages of using micrographics to retain records for a business.
10. Information Processing.	10. Demonstrate skill in Word Processing/Data Base Management Programs.
Information processing cont'd.	10.1 Enter, move, and edit alphanumeric data.
	10.2 Retrieve, save, and update alphanumeric data.
	10.3 Use available display options.

Information processing cont'd.	10.4 Apply Data Base Management to a particular task. 10.5 Initiate search by variable operations in pre-stored data. 10.6 Access a remote terminal and use data from remote terminal, if available.
11. Word Processing Application.	11. Apply skills and knowledge in documents processing business. 11.1 Load software using appropriate commands to access software functions. 11.2 Maintain a log. 11.3 Create a file. 11.4 Create a series of files in a specified time. 11.5 Enter, read, edit, and print data in a specific file. 11.6 Enter, read, edit, and print in a series of business documents. 11.7 Compose and keyboard business documents.

Word processing application cont'd.	11.8 Retrieve data from sequential and direct access files. 11.9 Manipulate files using special function keys to merge stored information from one file to another. 11.10 Organize and prioritize work for increased production.
12. Electronic mail-distribution.	12. Recognize the contributions EMMS makes to office production. 12.1 Discuss the advantages of electronic mail vs regular mail. 12.2 Explain high speed electronic mail systems developed by the U.S. Postal Service: a) E-COM-Electronic Computer Originated Mail, b) INTELPOST-INTernational ELectronic POSTal service. 12.3 Discuss the following methods of transmitting information electronically--voice, data, graphic or image, and video.

12.4 Describe the following EMMS-Electronic Mail Message Systems: a) Communicating Word Processors, b) Teletypewriter Network, c) Mailgram, d) Facsimile (FAX), e) Satellite, f) Voice, store and forward, and g) Teleconferencing.

13. Leadership.

13. Recognize the responsibilities of a leader and the importance of cooperation in a group setting.

13.1 Explain the purposes and goals of a national student organization.

13.2 Describe the organizational structure of the organization.

13.3 Conduct a local election and describe officer duties.

13.4 Explain the functions of an Advisory Council.

13.5 Identify and use the resource publications for a national student organization.

13.6 Identify local public relations techniques.

	13.7 Identify committee needs and understand committee purposes.
14. Transcription.	14. Perform dictation and transcription activities.
	14.01 Perform stenographic assignments in a practical work situation.
	14.02 Perform transcribing activities that will produce business correspondence.
15. Reprographics.	15. Operate most commonly used reprographics equipment.
	15.1 Determine when the fluid, stencil, photocopy, or offset is the most appropriate duplication method.
	15.2 Use proper procedures for fluid preparation.
	15.3 Use proper procedures for stencil preparation.
	15.4 Use proper procedures for photocopy preparation including cutting and pasting.
	15.5 Operate reprographics equipment.

16. Office Simulations.	16. Perform actual tasks performed by office workers in a simulated situation. 16.1 Complete all tasks with employment standards.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0601 Secretarial and Related Programs, Other
(Shorthand)

07.0601 Secretarial and Related Programs, General -- an instructional program that generally prepares individuals to record and transcribe communications and to abstract, classify, and file information.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Theory Principles.	1. Demonstrate knowledge and skill by writing alphabetic characters and outlines, brief forms, phrases. 1.1 Write all alphabetic characters. 1.2 Construct shorthand outlines. 1.3 Write all brief forms. 1.4 Write frequently used phrases. 1.5 Read familiar shorthand plates. 1.6 Read unfamiliar shorthand plate.
2. Dictation.	2. Demonstrate ability to take dictation using acceptable dictation techniques. 2.1 Take dictation from familiar bookplate material and transcribe. 2.2 Take dictation from new, unpreviewed material.

3. Transcription.

3. Demonstrate ability to transcribe dictated material into mailable transcript form from familiar dictation, unpreviewed dictation, and office style dictation.

   3.1 Correctly spell words used in dictation and transcription.

   3.2 Divide words at the acceptable place within the word.

   3.3 Use correct grammar in transcription.

   3.4 Typewrite correct abbreviations.

   3.5 Select the correct word to be inserted into a sentence for an omitted word.

   3.6 Use capital letters.

   3.7 Use numbers, money amounts, and times.

4. Advanced Transcription.

4. Demonstrate ability to typewrite acceptable transcripts of both new and familar dictation material.

   4.1 Use correct paragraphing.

   4.2 Keyboard acceptable transcripts at a rate of 10-14 words a minute from dictated familiar material.

4.3 Keyboard acceptable transcripts at a rate of 15 or more words a minute from dictated familiar material.

4.4 Keyboard acceptable transcripts at a rate of 10-14 words a minute from dictated, new, unpreviewed material.

4.5 Keyboard acceptable transcripts at a rate of 15 or more words a minute from dictated, new, unpreviewed material.

4.6 Keyboard acceptable transcripts at a rate of 10-14 words a minute from office-style dictation.

4.7 Keyboard acceptable transcripts at a rate of 15 or more words a minute from office-style dictation.

5. Interpersonal Skills.

5. Demonstrate proper business attitude and work habits.

5.1 Demonstrate the ability to organize and prioritize work for increased production.

5.2 Demonstrate ability to maintain a businesslike attitude.

5.3 Dress in proper business attire.

5.4 Exhibit the attitudes and work habits necessary for good interpersonal and employee/employer relations, including self-discipline, self-evaluation, attendance and punctuality, acceptance of responsibility.

6. Leadership.

6. Develop and demonstrate attributes essential to the successful operation of the organization.

6.1 Organize and plan a program of work.

a. Determine objective of the activity.

b. List strategies to accomplish the objective.

c. Prioritize strategies.

d. Determine personnel needed to handle details.

e. Establish time line and deadlines.

6.2 Recognize the need for a line of authority and carry out responsibilities.

6.3 Apply human relation skills in the organization.

6.4 Solve problems using a decision-making process.

6.5 Apply the principles of parliamentary procedures in a meeting situation.

6.6 Prepare and deliver an effective public speech.

6.7 Understand the need for evaluation processes with a variety of management techniques.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0605 Medical Secretary

07.0605 Medical Secretary -- an instructional program that prepares individuals to perform secretarial duties utilizing a knowledge of medical terminology and hospital, clinic, or laboratory procedures. Includes instruction in writing reports, such as case histories, and understanding legal and insurance forms.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Employment process.	1. Demonstrate the knowledge and skills necessary to acquire employment.
	1.1 Identify job opening sources.
	1.2 Compose and type application letter.
	1.3 List resume items.
	1.4 Compose and keyboard a resume.
	1.5 Identify the purpose of interviews.
	1.6 Identify the steps in interview preparation.
	1.7 Identify interview questions.
	1.8 Identify purposes and types of interviews.
	1.9 Identify qualities of an applicant.
	1.10 Participate in an interview.
	1.11 Identify vocational goals.

Employment process cont'd.

1.12 Determine and revise as needed personal performance goals for the school year.

1.13 Conduct self-evaluations periodically.

1.14 Maintain a record of progress (personal profile) toward established goals.

1.15 Identify personal job qualifications for various office positions.

1.16 Identify the duties, knowledges, skills, and personal traits needed for office positions.

1.17 Identify classifications of office workers.

1.18 Determine life style, goals, career preference, mental and/or physical aptitude and abilities.

1.19 Determine relationship between life styles, goals and careers.

1.20 Plan career goals based on identified aptitudes, traits, interests, and abilities.

2. Financial records.

2. Describe the importance of accurate recordkeeping and develop proficiency in processing financial records.

2.1 Post information from source documents to patients ledger cards.

Financial records cont'd.	2.2	Prepare patients statements for billing.
	2.3	Complete legible check reocrds and check from source documents.
	2.4	Prepare deposit slips.
	2.5	Prepare collection letters.
3. Insurance.	3.	Demonstrate knowledge of insurance forms and methods used for processing.
	3.1	Keyboard information from source documents to proper selections on appropriate claim forms for Blue Cross/Blue Shield, Medicare, Medicaid.
4. Medical terminology.	4.	Apply commonly used medical terms in processing patient files.
	4.1	Define medical prefixes and suffixes.
	4.2	Spell and pronounce commonly used medical terms.
	4.3	Define commonly used medical abbreviations.
5. Patient preparation.	5.	Demonstrate skills in preparing patients for examinations.
	5.1	Verify and complete a patient information record.
	5.2	Prepare patient for examination.
	5.3	Drape the patient.

6. Receptionist activities.

6. Demonstrate how to perform receptionist duties required in a medical office.

    6.1 Greet patients and visitors in an appropriate manner.

    6.2 Maintain an appointment book.

    6.3 Perform follow-up procedures in scheduling, cancelling, and rescheduling appointments.

    6.4 Opem, sort and route mail.

    6.5 Determine classification of specialized mail.

    6.6 Demonstrate proper procedures for placing and receiving calls.

    6.7 Prepare written telephone messages.

7. Records management.

7. Apply concepts of file organization and management.

    7.1 Apply alphabetic filing rules.

    7.2 Apply numeric filing rules.

    7.3 Prepare a cross-reference sheet.

    7.4 Follow charge-out procedures.

Records management cont'd.	7.5 Retrieve materials or information from files. 7.6 Maintain a tickler file.
8. Keyboarding.	8. Demonstrate ability to apply skills and knowledge in processing business documents. 8.1 Prepare mailable business correspondence. 8.2 Prepare labels. 8.3 Prepare index cards. 8.4 Keyboard information from source documents to patient's medical records. 8.5 Keyboard minutes of a meeting.
9. Word processing.	9. Apply skills and knowledge in processing business documents. 9.1 Demonstrate ability to load software using appropriate commands to access software functions. 9.2 Demonstrate ability to maintain a log. 9.3 Demonstrate ability to create a file. 9.4 Demonstrate ability to create a series of files in a specific time. 9.5 Demonstrate ability to enter, read, edit and print data in a specific file.

Word processing cont'd.	9.6 Demonstrate ability to enter, read, edit and print a series of business documents. 9.7 Demonstrate ability to compose and keyboard business documents. 9.8 Demonstrate ability to retrieve data from sequential and direct access files. 9.9 Demonstrate ability to manipulate files using special function keys to merge stored information from one file to another. 9.10 Demonstrate ability to organize and prioritize work for increased production.
10. Development of leadership skills through VSO and related activities.	10.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0608 Word/Information Processing

07.0608 Word/Information Processing -- an instructional program that prepares individuals to edit and produce written communications utilizing special-purpose machines to correct, format, and print information.

Program Objective	Standard of Student Expectation
The Program will provide instruction in:	The Student will be expected to:
1. Employment Outlook.	1. Demonstrate skills, attitudes, and experience required for employment in Word Processing occupations.
	1.1 Identify specific job skills, experience, and traits required for Word Processing occupations.
2. Grooming.	2. Demonstrate the qualities of grooming necessary to acquire and maintain employment.
	2.1 Identify traits of proper grooming.
	2.2 Distinguish between mannerisms in grooming.
	2.3 Display proper grooming for an interview.
	2.4 Explain important factors in grooming.
3. Interpersonal Skills	3. Identify own abilities, aptitudes, traits and interest in relationship to career.

Interpersonal skills cont'd.

3.1 Determine life style, goals, career preference, mental and/or physical aptitude and abilities.

3.2 Determine relationship between life styles, goals, and careers.

3.3 Plan career goals based on identified aptitudes traits, interests, and abilities.

3.4 Exhibit the attitudes and work habits necessary for good interpersonal and employee/employer relations, including self-discipline, self-evaluation, attendance and punctuality, acceptance of responsibility.

4. Office Environment.

4. Describe the impact word processing made on the modern office.

4.1 Discuss the evolution of word processing and word processing machines, i.e., MT/ST-Magnetic Tape Selectric Typewriter, VDT-Video Display Terminals.

4.2 Discuss the disadvantages of the traditional office structure.

4.3 Discuss ergonomics as it relates to the work station.

Office environment cont'd.

4.4 Discuss the advantages and disadvantages of the centralized and decentralized/networks/satellites/work clusters office systems.

4.5 Sequence the steps of the information processing cycle; i.e., processing, output (including reprographics), distribution/communication, records management, (also called storage and retrieval), and output.

4.6 Arrange in sequence and discuss the steps of workflow in a centralized word processing system.

4.7 Arrange in sequence and discuss the steps of work flow in a decentralized word processing system.

4.8 Discuss the key inventions contributing to a revolution in office practice, i.e., typewriter, telephone, and computer.

5. Word Processing Equipment

5. Describe the types, capabilities, and functions of word processing hardware.

5.1 Define Word Processing Systems.

Word processing equipment cont'd.	5.2 Discuss the basic components of a word processor, i.e., keyboard, internal processor or CPU storage, printer, and VDT-Video Display Terminal or CRT-Cathode Ray Tube.
	5.3 Explain screen-load, full-screen, and partial screens.
	5.4 Explain the operations of an online and offline system.
6. Keyboarding.	6. Demonstrate how to operate an alphanumeric keyboard and ten-key pad with employable speed and accuracy.
	6.1 Demonstrate ability to operate the alphanumeric keyboard with speed and accuracy.
	6.2 Demonstrate ability to start up and shut down the microcomputer.
	6.3 Demonstrate ability to operate special function keys on the microcomputer.
	6.4 Demonstrate ability to operate a printer, load paper, and print data.

7. Input.

7. Define the function of common input devices.

7.1 Explain "sources of words"; i.e., longhand, shorthand and machine dictation.

7.2 Explain the basic kinds of voice-storage media.

7.3 Explain the features of short and quick documents, long documents, and repetitive documents.

7.4 Describe various ways in which source data are converted to machine readable medium.

7.5 Discuss Temporary Memory, Internal Storage, and External Storage.

7.6 Categorize a list of software according to function.

7.7 Identify businesses that use word processing.

7.8 Discuss the advantages of using integrated software packages.

8. Output.	8. Identify devices used for output.
	8.1 Discuss and describe solid character printers, dot matrix, serial impact printers, line impact printers, ink jet printers, and laser printers.
	8.2 Explain the disadvantages and advantages of impact and nonimpact printers.
9. Word Processing Application.	9. Demonstrate ability to apply skills and knowledge in processing business documents.
	9.1 Demonstrate ability to load software using appropriate commands to access software functions.
	9.2 Demonstrate ability to maintain a log.
	9.3 Demonstrate ability to retrieve data from sequential and direct access files.
	9.4 Demonstrate ability to manipulate files using special function keys to merge stored information from one file to another.
	9.5 Demonstrate ability to enter and read data in a specific file.

Word processing application cont'd.

9.6 Demonstrate ability to use basic English skills in correcting grammatical errors in a business document.

9.7 Demonstrate ability to organize and prioritize work for increased production.

9.8 Demonstrate ability to create a file.

9.9 Demonstrate ability to use basic English skills in identifying and correcting grammatical errors in a business document.

9.10 Demonstrate ability to compose and keyboard business documents.

9.11 Demonstrate incremental speed and accuracy.

10. Electronic Mail-Distribution.

10. Describe the contributions EMMS made to office production.

10.1 Discuss the advantages of electronic mail vs regular mail.

10.2 Explain high speed electronic mail systems developed by the U.S. Postal Service: a) E-COM-Electronic Computer Originated Mail, b) INTELPOST-INTernational ELectronic POSTal service.

Electronic Mail distribution cont'd.	10.3	Discuss the following methods of transmitting information electronically: voice, data, graphic or image, and video.
	10.4	Describe the following EMMS-Electronic Mail Message Systems: a) Communicating Word Processors, b) Teletypewriter Network, c) Mailgram, d) Facsimile (FAX), e) Satellite, f) Voice, store and forward, and g) Teleconferencing.
11. Reprographics and Records Management.	11.	Develop an understanding of methods of reprographics and records management.
	11.1	Define reprographics and record management terminology.
	11.2	Discuss the methods of reprographics: a) repetitive printing, b) carbon copies, c) duplicators, d) photocopying, e) facsimile, f) electronic copier/printers, g) phototypesetting or photocomposition.
	11.3	Describe the following methods of assembling documents: a) collating and sorting, b) binding, c) binding and inserting.

Reprographics and Records Management cont'd.	11.4 Describe centralized and decentralized office systems. 11.5 Describe the kind of system used in the traditional filing system. 11.6 Discuss automated filing equipment and supplies. 11.7 Identify types of magnetic media. 11.8 Identify types of microfilms. 11.9 Identify types of equipment used to retrieve microfilms and describe each. 11.10 Describe the centralized and decentralized records management systems.
12. Information Processing.	12. Demonstrate how to process Word Processing/Data Base Management Programs. 12.1 Demonstrate ability to enter, move, and edit alphanumeric data. 12.2 Demonstrate ability to retrieve, save, and update alphanumeric data.

Information Processing cont'd.	12.3	Demonstrate ability to use available display options.
	12.4	Demonstrate ability to apply Data Base Management to a particular task.
	12.5	Demonstrate ability to initiate search by variable operations in prestored data.
	12.6	Demonstrate ability to access a remote terminal and use data from remote terminal if available.
13. Vocational student organization membership.	13.1	Identify the advantages of participating in Vocational student organizations.
	13.2	Participate as a member of a Vocational student organization.
14. Development of leadership skills through VSO and related activities.	14.1	Demonstrate leadership development in:
		a. Social and interpersonal skills.
		b. Oral and written communication.
		c. Organization and management skills.
		d. Civic responsibilities.
		e. Parliamentary procedures.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0701 Typing, General Office, and Related Programs, General
(Typing)

07.0701 Typing, General Office, and Related Programs, General -- an instructional program that generally prepares individuals to record, duplicate, and retrieve data, including classifying, sorting, and filing correspondence, records, and other data. Includes instruction in shipping and receiving procedures, stock and inventory maintenance, and operation of office machines.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Keyboard Mastery and Related Skills.	1. Demonstrate the ability to operate the typewriter using the touch method and develop related skills needed to process.
	1.1 Prepare machine and work area information.
	1.2 Demonstrate correct paper insertion, carriage return, and paper removal.
	1.3 Use machine parts properly.
	1.4 Demonstrate controlled, even touch.
	1.5 Demonstrate speed and accuracy progress.
	1.6 Use correct fingering for the alphabetic, symbol keyboard.
	1.7 Center horizontally and vertically.

	1.8 Tabulate in multiple columns. 1.9 Keyboard on ruled lines. 1.10 Keyboard from handwritten material. 1.11 Comprehend proofreader's symbols. 1.12 Keyboard interoffice memorandums. 1.13 Keyboard basic business letters. 1.14 Keyboard at reasonable speed with accuracy.
2. Business Letters.	2. Demonstrate the ability to type letters in the block style with open punctuation and center correctly. 2.1 Keyboard straight-copy average difficulty paragraph material in the block style with open punctuation and correctly center. 2.2 Keyboard a rough-draft letter, proofread, and retype from rough-draft copy (arranged copy). 2.3 Keyboard a rough-draft letter, proofread, and retype from rough draft (unarranged copy, longhand corrections). 2.4 Keyboard material in theme form. 2.5 Keyboard material centered on half sheet.

3. Tabulation.

3. Demonstrate ability to keyboard tabulated columns and with columnar headings.

   3.1 Keyboard straight-copy average difficulty material with varying numbers of paragraph material.

   3.2 Keyboard a summary of tabulation rules in manuscript form.

   3.3 Keyboard three-column and four-column tables with heading, centered vertically and horizontally.

   3.4 Keyboard a three-column table with primary and columnar headings.

   3.5 Keyboard a three-column table with primary, secondary, and columnar headings; double underline; and footnote.

   3.6 Keyboard a two-column table with primary, secondary, and columnar headings; leaders; indentions; and footnote.

   3.7 Keyboard a five-column and a seven-column boxed table with primary, secondary, and columnar headings.

   3.8 Keyboard tabulated material on an acceptable production level.

4. Manuscripts/Reports.	4. Demonstrate ability to keyboard manuscripts or reports with and without footnotes, bound and unbound.
	4.1 Keyboard straight-copy average difficulty paragraph material.
	4.2 Keyboard statistical rough-draft average difficulty paragraph material.
	4.3 Keyboard an unbound one-page manuscript without footnotes.
	4.4 Keyboard an unbound one-page manuscript from rough draft.
	4.5 Keyboard a one-page, leftbound manuscript with footnotes.
	4.6 Keyboard a leftbound manuscript of more than one page with footnotes and bibliography.
5. Office Production Skills.	5. Demonstrate typewriting ability with straight-copy paragraph material and office production work from unarranged copy including letters, reports, tables,and the related basic items.
	5.1 Keyboard average difficulty straight-copy paragraph material.
	5.2 Keyboard average difficulty statistical rough-draft paragraph material.

Office production skills cont'd.	5.3 Keyboard an invoice. 5.4 Keyboard envelope addresses. 5.5 Keyboard and correct paragraph copy. 5.6 Center, align, and fill-ins. 5.7 Keyboard postal cards. 5.8 Keyboard index cards. 5.9 Keyboard large envelopes. 5.10 Keyboard an interoffice memorandum. 5.11 Keyboard voucher check. 5.12 Justify the right margin. 5.13 Keyboard a two-page letter using special business letter variations.
6. Letters/Reports/Tables.	6. Demonstrate the ability to key straight-copy and statistical rough draft paragraph material. 6.1 Keyboard average difficulty straight-copy paragraph material. 6.2 Keyboard average difficulty statistical rough-draft paragraph material.

Letters/reports/tables cont'd.

6.3 Keyboard business letters reviewing the different styles and punctuation.

6.4 Keyboard a variety of tabulation problems.

6.5 Keyboard a three-page letter with title line, tabulation, enumerated items, company name, and copy notation.

6.6 Keyboard an itinerary.

7. Business letters.

7. Demonstrate the ability to key from unarranged copy, business letters arranged in the three basic letter styles (block, modified block, and modified block with indented paragraphs), and will be able to assemble a carbon pack and erase errors on carbon copies.

7.1 Keyboard average difficulty straight-copy paragraph material.

7.2 Keyboard a block style letter with open punctuation.

7.3 Keyboard a modified block style letter with mixed punctuation.

7.4 Keyboard a modified block style letter with indented paragraphs and mixed punctuation.

7.5 Assemble a carbon pack and erase errors on carbon copies.

8. Business letters with special features.	8. Demonstrate the ability to key from unarranged copy material a variety of business letters (AMS simplified, inverted paragraph, and letter with side headings) containing special features in correct form with all errors corrected. 8.1 Keyboard average difficulty straight-copy paragraph material. 8.2 Keyboard an AMS simplified style letter. 8.3 Keyboard an inverted paragraph style letter. 8.4 Keyboard a letter with side headings. 8.5 Keyboard a letter in any correct style using the following notations: enclosure, carbon copy to two people, and postscript.
9. Arranging/typing tables.	9. Demonstrate the ability and skill to keyboard a series of statistical tables (including main and secondary headings, horizontal rulings, leaders, footnotes, and source notes). 9.1 Keyboard straight-copy paragraph material of average difficulty. 9.2 Keyboard table with columnar headings.

Arranging typing/tables cont'd.	9.3 Keyboard boxed table with columnar headings.
	9.4 Keyboard table with grouped data and notes.
	9.5 Keyboard table with grouped data and leaders.
10. Selected business forms.	10. Demonstrate the ability to key a series of commonly used business forms (a purchase order, a bill of lading, and an invoice).
	10.1 Keyboard straight-copy paragraph material of average difficulty.
	10.2 Keyboard a purchase order.
	10.3 Keyboard a bill of lading.
	10.4 Keyboard an invoice.
11. Business reports.	11. Demonstrate the ability and skill to keyboard a series of commonly used reports (table of contents, two-page report manuscript, and three-column statement of financial condition).
	11.1 Keyboard straight-copy paragraph material of average difficulty.
	11.2 Keyboard an outline.

Business reports cont'd.

11.3 Keyboard an unbound report.

11.4 Keyboard a top-bound report.

11.5 Keyboard a title page.

11.6 Keyboard table of contents.

11.7 Keyboard statement of earnings.

11.8 Keyboard an income statement.

12. Reproduction Typing

12. Demonstrate the ability and skill to key unbound manuscripts, left-bound manuscripts, top-bound manuscripts, itineraries, and form letters on stencils and masters and to run material typed on the mimeograph, duplicator, and photocopier machines.

12.1 Keyboard straight-copy paragraph copy or material.

12.2 Keyboard statistical paragraph copy or material.

12.3 Keyboard unbound manuscript on stencil and run copies on mimeograph machine.

12.4 Keyboard form letter on stencil and run copies on mimeograph machine.

12.5 Keyboard fill-ins on form letters.

12.6 Keyboard left-bound manuscript on spirit master and run copies on duplicating machine.

12.7 Keyboard itinerary on spirit master and run copies on duplicating machine.

12.8 Keyboard top-bound manuscript and run copies on photocopier.

12.9 Keyboard an agenda and run copies on photocopier.

13. Special Business Communications.

13. Demonstrate the ability to key interoffice correspondence (memos), message-reply memos, telegrams, and confirmation letters.

13.1 Keyboard interoffice correspondence (memo).

13.2 Keyboard a message-reply memo.

13.3 Keyboard a telegram on plain paper.

13.4 Keyboard a letter of confirmation.

13.5 Keyboard straight-copy paragraph material of average difficulty.

14. Letters and tables on special-size.

14. Demonstrate the ability to key letters stationery and tables on half-size stationery, executive size stationery, and government-size stationery.

Letters and tables on special-size cont'd.	14.1 Keyboard a letter on half-size stationery. 14.2 Keyboard a table in reading position on a sheet of half-size paper. 14.3 Keyboard a letter on executive-size stationery. 14.4 Keyboard a table in reading position on a sheet of executive-size paper. 14.5 Keyboard a letter on government-size stationery. 14.6 Keyboard a table in reading position on government-size stationery. 14.7 Keyboard straight-copy paragraph material of average difficulty.
15. Reports, memos, and letters with tables.	15. Demonstrate the ability to key a series of reports, memos, and letters containing tables. 15.1 Keyboard a report containing a table. 15.2 Keyboard a memo containing a table. 15.3 Keyboard a letter containing a table. 15.4 Keyboard straight-copy paragraph material of average difficulty.

16. Keyboard.

16. Demonstrate ability to operate an alphanumeric keyboard and ten-key pad with employable speed.

   16.1 Demonstrate ability to operate the alphanumeric keyboard by using the touch method.

   16.2 Demonstrate ability to start up and shut down the microcomputer.

   16.3 Demonstrate ability to operate special function keys on the microcomputer.

   16.4 Demonstrate ability to operate a printer, load paper, and print data.

17. Microcomputer.

17. Demonstrate the ability to arrange simple problem copy (business & personal letters, tabulations, manuscripts, outlines and rough drafts) in correct form using vertical and horizontal centering on a microcomputer or word processor.

   17.1 Demonstrate ability to load a program into the microcomputer from a data disk or cassette.

   17.2 Demonstrate ability to proofread, correct errors, and make editorial changes in data presented on video display.

   17.3 Demonstrate ability to save, retrieve, and update data.

17.4 Demonstrate knowledge of computer-related terminology.

18. Personal attributes and skills.

18. Demonstrate a knowledge of skills and personal attributes essential for typists and related areas.

18.1 Describe personality traits/characteristics for selected office careers.

18.2 Identify and describe related area job titles and responsibilities.

18.3 Identify individual career goals.

18.4 Establish short- and long-range goals for professional growth.

18.5 Discuss office attire as it relates to dress code and place of employment.

18.6 Discuss the environment (work station), i.e., walls, lighting, location, and temperature.

19. Leadership training.

19. Develop attributes essential to the successful operation of an organization.

19.1 Organize and plan a program of work.

19.2 Recognize the need for a line of authority and carry out responsibilities.

Leadership training cont'd.

19.3 Apply human relation skills in the organization.

19.4 Solve problems using a decision-making process.

19.5 Apply the principles of parliamentary procedure in a meeting situation.

19.6 Prepare and deliver an effective public speech.

19.7 Describe the need for evaluation processes with a variety of management techniques.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0103 Bookkeeping

07.0103 Bookkeeping -- An instructional program that prepares individuals to compute, classify, and record numerical data to keep financial records and ledgers and prepare tax reports and monthly statements.

Program Objective		Standard
		The Student will be expected to:
1. Establishing Records	1.01	Demonstrate an understanding of the basic concepts of bookkeeping.
	1.02	Define Specific bookkeeping terms, i.e., assets, liabilities, capital, debits, credits, journal, source document, and double entry bookkeeping.
	1.03	Classify items as assets, liabilities, or capital.
	1.04	Solve the accounting equation.
	1.05	Complete a balance sheet including the heading asset, liability, and capital sections.
	1.06	Transfer the beginning balance sheet information to the general journal in correct entry form.
	1.07	Open general ledger accounts by recording the account titles and assigned numbers.
2. Business Transaction	2.01	Analyze and interpret various business transactions using accounting terminology.
	2.02	Level the debit and credit side of accounts.
	2.03	Level the increase and decrease side of accounts.
	2.04	Analyze transactions involving increases and decreases in accounts.
	2.05	Journalize cash transactions in a two-column journal and a multi-column cash journal.
	2.06	Journalize transactions of a merchandising business in a combination journal and special journals.
	2.07	Foot and prove the equality of debits and credits in journals.
	2.08	Prove cash by comparing the check record or actual cash balance with the cash journal balance.
	2.09	Total and rule the journals.
	2.10	Post the individual amounts in the general columns to the account in the general and subsidiary ledgers.

	2.11	Post the totals of the special columns to the general journal.
3. End of Fiscal Period	3.01	Describe each phase of the accounting cycle and its relationship to the total process.
	3.02	Food ledger accounts and compute the account balances.
	3.03	Record account balances in trial balance columns of worksheet and prove equality of debits and credits.
	3.04	Follow recognized procedures for locating errors that can cause trial balances to be out of balance.
	3.05	Plan and record adjustments on the worksheet needed to update account balances, i.e., merchandise inventory, prepaid amounts, and supplies.
	3.06	Total adjustment columns and prove equality of debit and credit totals.
	3.07	Combine trial balance and adjustment columns and make extensions to the appropriate columns.
	3.08	Total the income statement and balance sheet columns.
	3.09	Calculate net income or net loss by determining difference in the income statement/balance sheet columns.
	3.10	Enter income/loss, total, and rule columns.
4. Financial Statements	4.01	Complete, interpret, and analyze simple financial statements.
	4.02	Update general ledger accounts by recording and posting adjusting entries.
	4.03	Prepare a journal entry to transfer the balances of the expense accounts to the summary account.
	4.04	Prepare a journal entry to transfer the balances of the revenue accounts to the summary account.
	4.05	Prepare a journal entry to transfer the balance of the income and expense summary accounts to the capital account.
	4.06	Prepare a journal entry to transfer the balance of the drawing account to the capital account.
	4.07	Post the closing entries to the general ledger.
	4.08	Prepare a post-closing trial balance.
	4.09	Prepare income statements from completed worksheets.
	4.10	Prepare capital statements from completed worksheets and capital account information.

4.11 Prepare balance sheets from completed worksheets and capital statements.

4.12 Apply verification principles using general and subsidiary ledgers to prepare schedules i.e., accounts receivable and accounts payable schedules.

4.13 Using financial statements, interpret the condition and progress of the business during a fiscal period.

5. Payroll

5.01 Prepare business forms.

5.02 Compute gross earnings for salaried employees and employees who receive hourly earnings including overtime and/or commissions.

5.03 Compute required and voluntary deductions using charts or by computations.

5.04 Compute net pay.

5.05 Record payroll computations in a payroll register and on individuals employees earnings records.

5.06 Computer a payroll change sheet and cash slips for disbursing cash payroll.

5.07 Prepare voucher checks.

5.08 Journalize and post the entries for salary expense, Federal Insurance Contributions Act (FICA) taxes, employee income taxes, and other deductions.

5.09 Calculate, journalize, and post the entries for employer FICA taxes, State unemployment Tax Act taxes (SUTA), and Federal Unemployment Tax Act (FUTA) taxes.

6. Data Processing

6.01 Demonstrate a functional knowledge of computers and their effects on society.

6.02 Describe the need and use of computers in today's economy and society.

6.03 Identify people, date, and advances in computation and hardware.

6.04 Identify and describe the major differences and similarities.

6.05 Explain how data is stored on a chip.

6.06 Explain how data is stored (random or sequential) on the media.

6.07 Describe coding systems used in modern computers.

6.08 Demonstrate knowledge of computer output, output

			media, and the use of each.
		6.09	Describe the characteristics and features of the input medium.
		6.10	Describe in random order the steps in the processing cycle.
7.	Human Relations Personality Development	7.01	Recognize the responsibilities of a leader and the importance of cooperation in a group setting.
		7.02	Discuss objectives of the office education program.
		7.03	Recognize the need for school and community involvement.
		7.04	Apply human relations skills.
8.	Office Attire	8.01	Demonstrate appropriate dress worn in business offices.
		8.02	Understand the need for acceptable office attire in the world of business.
9.	Decision Making	9.01	Demonstrate attributes essential to the successful operation of business.
		9.02	Solve problems using a decision-making process.
10.	Safety and Health Standards	10.01	Recognize the need for safety standards in business.
		10.02	Apply safety and health procedures.
11.	Employment Process	11.01	Recognize abilities, aptitudes, traits, and interests in relationship to careers.
		11.02	Identify various career goals that incorporate the necessary aptitudes traits, interests, and abilities for a specific career.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0705 General Office Procedures

07.0705 General Office Clerk (General Office Procedures) -- an instructional program that prepares individuals to perform a variety of cleerical duties such as copying data; compiling records and reports; tabulating and posting data in record books; providing information and conducting interviews; operating office machines; and handling mail and correspondence.

Program Objective

The program will provide instruction in:

1. Employment process.

Standard of Student Expectation

The student will be expected to:

1. Demonstrate the knowledge and skills necessary to acquire employment.
    - 1.1 Identify job opening sources.
    - 1.2 Compose and type application letter.
    - 1.3 List resume items.
    - 1.4 Compose and keyboard a resume.
    - 1.5 Identify the purposes of interviews.
    - 1.6 Identify the steps in interview preparation.
    - 1.7 Identify interview questions.
    - 1.8 Identify purposes and types of interviews.
    - 1.9 Identify qualities of an applicant.
    - 1.10 Participate in an interview.

1.11 Identify vocational goals.

1.12 Determine and revise as needed personal performance goals for the school year.

1.13 Conduct self-evaluations periodically.

1.14 Maintain a record of progress (personal profile) toward established goals.

1.15 Identify personal job qualifications for various positions.

1.16 Identify the duties, knowledges, skills, and personal traits needed for office positions.

1.17 Identify classifications of office workers.

1.18 Determine life style, goals, career preference, mental and/or physical aptitude and abilities.

1.19 Determine relationship between life styles, goals, and careers.

1.20 Plan career goals based on identified aptitudes, traits, interests, and abilities.

2. Grooming.

2. Recognize and project the qualities of grooming necessary to acquire and maintain employment.

2.1 Identify traits of proper grooming.

2.2 Identify mannerisms.

2.3 Display proper grooming for an interview.

2.4 Explain importance of proper grooming.

3. Data processing.

3. Develop a functional knowledge of computers and their effects on society.

3.1 Arrange the steps in the data processing cycle in sequence.

3.2 Describe various ways in which source data are converted to machine readable medium.

3.3 Describe the need and use of computers in today's economy and society.

3.4 Describe the major components of the central processing unit of a computer system.

3.5 Explain how data is stored on the chip.

3.6 Describe how data is stored randomly or sequentially on the media.

3.7 Describe coding systems used in modern computers.

3.8 Determine how a common business application can be automated, i.e., accounts payable, payroll, inventory.

	3.9	Demonstrate acceptable ability to handle and care for software and hardware.
	3.10	Analyze the duties, knowledge, skills, and traits needed for computer-related careers.
4. Keyboarding.	4.	Demonstrate ability to operate an alphanumeric keyboard and ten-key pad with employable speed and accuracy.
	4.1	Demonstrate ability to operate the alphanumeric keyboard.
	4.2	Demonstrate ability to start up and shut down the microcomputer.
	4.3	Demonstrate ability to operate special function keys on the microcomputer.
	4.4	Demonstrate ability to operate a printer, load paper, and print data.
5. Communications.	5.	Demonstrate ability to apply basic oral and written communication skills.
	5.1	Edit, input, and produce a short memo, letter, and report.
	5.2	Compose simple business communications using correct grammar, letter-writing principles and all relevant information.
	5.3	Edit and input minutes of a meeting.
	5.4	Demonstrate ability to spell and define business terms.
	5.5	Demonstrate proper telephone manners.
	5.6	Receive calls.

5.7 Transfer calls.

5.8 Place local and long distance calls.

5.9 Use telephone directory.

5.10 Take telephone messages.

5.11 Define special telephone services.

5.12 Demonstrate knowledge of time zones of United States.

5.13 Define domestic telegraph services.

5.14 Define international telegraph service.

5.15 Prepare telegraphic messages for sending.

5.16 Demonstrate knowledge of machines used in sending telegraphic messages.

5.17 Count chargeable words for domestic telegraph messages.

5.18 Select telephone or telegraph.

5.19 Select appropriate telegraphic service.

5.20 Select appropriate telephone service.

5.21 Select modes of travel.

5.22 Select and list lodging information.

5.23 Type letters of reservation.

5.24 List information found in an itinerary.

5.25 Type an itinerary.

6. Financial records.

6. Gain knowledge and understanding of the importance of accurate record keeping and develop proficiency in processing financial records.

6.1 Identify financial services.

6.2 Write checks and maintain a check register.

6.3 Determine appropriate endorsements.

6.4 Make deposits.

6.5 Reconcile bank statements.

6.6 Prepare petty cash vouchers, record petty cash transactions, and replenish the fund.

6.7 Record applicable information on requisitions, purchase orders, and invoices.

6.8 Demonstrate ability to prepare invoices, compute extension totals, applicable discounts, and sales tax.

6.9 Prepare payroll time cards.

6.10 Prepare payroll records from time cards.

7. Mail processing.

7. Demonstrate ability to process electronic mail and apply correct procedures in classifying mail.

7.1 Describe the classes of USA mail and special mailing services.

7.2 Select appropriate mail services in terms of importance, time factor, and cost.

7.3 Sort incoming mail and arrange in priority order for employees to handle.

7.4 Identify duties of an office worker in handling incoming and outgoing mail.

7.5 Address envelopes using suggested format of the United Postal Service.

7.6 Prepare mailing lists.

7.7 Up-date mailing lists.

8. Work processing.

8. Gain knowledge and ability to process business reports and correspondence on a dedicated word processor or a microcomputer.

8.1 Demonstrate ability to load a program into the microcomputer from a data disk or cassette.

8.2 Demonstrate ability to proofread, correct errors, and make editorial changes in data presented on video display.

8.3 Demonstrate ability to save, retrieve and update data.

9. Records management.

9. Understand concepts of ifles organization and management.

9.1 File materials in a alphabetic filing system.

9.2 File materials in a geographic filing system.

9.3 File materials in a numeric filing system.

9.4 File materials in a subject filing system.

9.5 Compare the advantages and disadvantages of each filing system.

9.6 Prepare cross reference sheets, when appropriate.

9.7 Inspect, index, code, sort, and arrange materials properly in folders.

9.8 Retrieve materials or information from files and provide information in written form.

9.9 Use proper procedures for charging out materials.

9.10 Maintain a tickler file.

9.11 Bring file folders up to date.

	9.12 Explain the advantages of using micrographics to retain records for a business.
10. Information processing.	10. Gain knowledge and ability to process word processing/data base management programs. 10.1 Demonstrate ability to enter, move, and edit alphanumeric data. 10.2 Demonstrate ability to retrieve, save, and update alphanumeric data. 10.3 Demonstrate ability to use available display options. 10.4 Demonstrate ability to apply Data Base Management to a particular task. 10.5 Demonstrate ability to initiate search by variable operations in pre-stored data. 10.6 Demonstrate ability to access a remote terminal and use data from remote terminal if available.
11. Word processing application.	11. Demonstrate ability to apply skills and knowledge in processing business documents. 11.1 Demonstrate ability to load software using appropriate commands to access software functions. 11.2 Demonstrate ability to maintain a log.

	11.3 Demonstrate ability to create a file.
	11.4 Demonstrate ability to create a series of files in a specified time.
	11.5 Demonstrate ability to enter, read, edit, and print data in a specific file.
	11.6 Demonstrate ability to enter, read, edit, and print in a series of business documents.
	11.7 Demonstrate ability to compose and keyboard business documents.
	11.8 Demonstrate ability to retrieve data from sequential and direct access files.
	11.9 Demonstrate ability to manipulate files using special functions keys to merge stored information from one file to another.
	11.10 Demonstrate ability to organize and prioritize work for increased production.
12. Electronic mail-distribution.	12. Recognize the contributions EMMS makes to office production.
	12.1 Discuss the advantages of electronic mail vs regular mail.

13. Leadership.

12.2 Explain high speed electronic mail systems developed by the U.S. Postal Service: (a) E-COM-Electronic Computer Originated Mail, (b) INTELPOST-INTernational Electronic POSTal service.

12.3 Discuss the following methods of transmitting information electronically --voice, data, graphic or image, and video.

12.4 Describe the following EMMS-Electronic Mail Message systems: (a) Communicating word processors, (b) Teletypewriter network, (c) Mailgram, (d) Facsimile (FAX), (e) Satellite, (f) Voice, store and forward, and (g) Teleconferencing.

13. Recognize the responsibilities of a leader and the importance of cooperation in a group setting.

13.1 Explain the purposes and goals of a national student organization.

13.2 Describe the organizational structure of the organization.

13.3 Conduct a local election and describe officer duties.

13.4 Explain the functions of an Advisory Council.

- 13.5 Identify and use the resource publications for a national student organization.
- 13.6 Identify local public relations techniques.
- 13.7 Identify committee needs and understand committee purposes.

14. Reprographics.

14. Operate most commonly used reprographics equipment.

- 14.1 Determine when the fluid, stencil, photocopy, or offset is the most appropriate duplication method.
- 14.2 Use proper procedures for fluid preparation.
- 14.3 Use proper procedures for stencil preparation.
- 14.4 Use proper procedures for photocopy preparation including cutting and pasting.
- 14.5 Demonstrate ability to operate reprographics equipment.

15. Office simulations.

15. Perform actual tasks performed by office workers in a simulated situation.

- 15.1 Complete all tasks with employment standards.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0707 Receptionist and Communication Systems Operation
Business Communications

07.0707 Receptionist and Communication Systems Operation -- an instructional program that prepares individuals to answer telephone and information requests, keep records of callers, make appointments, interview people to secure required data, and make travel reservations and to operate telephone switchboards and similar equipment, relay incoming and interoffice calls, establish connections between subscribers, supply information, calculate charges, and operate telegraph and similar equipment for transmitting and receiving messages.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Interpersonal skills.	1. Demonstrate a knowledge of skills and personal attributes essential for typists and related careers.
	1.1 Describe personality traits/characteristics for selected office careers.
	1.2 Identify and describe related area job titles and responsibilities.
	1.3 Identify individual career goals.
	1.4 Establish short- and long-range goals for professional growth.
	1.5 Discuss office attire as it relates to dress code and place of employment.
	1.6 Discuss office environment (work station), i.e., walls, lighting, location, and temperature.

	1.7	Exhibit the attitudes and work habits necessary for good interpersonal and employee/employer relations, including self-discipline, self-evaluation, attendance and punctuality, acceptance of responsibility.
2. Dictionary skills..	2.	Locate and record information found in a dictionary.
	2.1	Locate and record general information found in a dictionary such as definitions, abbreviations, parts of speech, etc.
	2.2	Locate and record syllabication, diacritical marks, definitions, and synonyms. .
	2.3	Write correct definitions for words on Suggested Statewide Reading Vocabulary List.
	2.4	Write correct spelling for commonly used vocabulary words.
	2.5	Write correct definitions for commonly used business and consumer terms.

3. Sentence structure.	3. Demonstrate ability to locate and understand ideas. 3.1 Identify the main idea and the conclusion according to pre-determined criteria. 3.2 Identify facts and opinions. 3.3 Identify unstated opinions. 3.4 Identify complete and incomplete sentences.
4. Parts of Speech.	4. Demonstrate how to use the parts of speech. 4.1 Write complete sentences using nouns and pronouns. 4.2 Identify verbs, verb phrases, and main verbs. 4.3 Determine usage of prepositions. 4.4 Write complete sentences using prepositions. 4.5 Write complete sentences using conjunctions. 4.6 Identify adjectives, adverbs, and interjections.

4.7 Identify possessives.

4.8 Write complete sentences using possessive forms of nouns and pronouns

5. Punctuation.

5. Demonstrate ability to use correct punctuation, capitalization, abbreviations, and numbers.

5.1 Punctuate sentences using the comma.

5.2 Punctuate sentences using correct end-of-sentence punctuation.

5.3 Punctuate sentences with colons, semi-colons, and dashes.

5.4 Punctuate sentences using correct capitalization.

5.5 Punctuate sentences requiring parentheses.

5.6 Use correct abbreviations.

5.7 Use correct form of numbers.

5.8 Apply proper rules of word division.

6. Business English.

6. Demonstrate the knowledge and skills in Business Education that are necessary for writing.

6.1 Write grammatically correct sentences.

Business English cont'd.

6.2 Supply synonyms for words.

6.3 Change sentences to the "You" point of view.

6.4 Change sentences to positive approach.

6.5 Write concise sentences.

6.6 Identify the parts of a letter.

6.7 Correct errors in business letters.

6.8 Prepare replies to business letters.

6.9 Identify the buffer approach.

6.10 Identify the "goodwill" approach.

6.11 Define business letter terms.

6.12 List the steps in planning the letter.

6.13 Identify the framework of the sales letter.

7. Composition.

7. Demonstrate the knowledge of composition by composing and typing business letters.

7.1 Compose and type a special request letter.

7.2 Compose and type a refusal of credit letter.

Composition cont'd.

7.3 Compose and type a thank you letter.

7.4 Compose and type a sales letter.

7.5 Compose and type a "yes" letter.

7.6 Compose and type a goodwill letter.

7.7 Compose and type mailable letters.

8. Manuscript Reports, Forms, and Memorandums

8. Demonstrate the ability to compose from rough drafts and instructions manuscript reports, forms, and interoffice memorandums with the degree of accuracy specified in the competencies.

8.1 Prepare and type manuscript reports.

8.2 Prepare and type a table.

8.3 Prepare and type on ruled forms.

8.4 Prepare and type a memorandum.

9. Leadership training.

9. Describe attributes essential to the successful operation of an organization.

9.1 Organize and plan a program of work.

9.2 Recognize the need for a line of authority and carry out responsibilities.

Leadership training cont'd.

9.3 Apply human relation skills in the organization.

9.4 Solve problems using a decision-making process.

9.5 Apply the principles of parliamentary procedure in a meeting situation.

9.6 Prepare and deliver an effective public speech.

9.7 Describe the need for evaluation processes with a variety of management techniques.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.0799 Typing, General Office and Related Programs, Other
Keyboarding

07.0799 Typing, General Office and Related Programs, Other -- any instructional program in typing, general office, and related programs.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Keyboard mastery and related skills.	1. Demonstrate how to operate the typewriter using the touch method and develop related skills needed to process information.
	1.1 Prepare machine and work area.
	1.2 Demonstrate correct paper insertion, carriage return, and paper removal.
	1.3 Use machine parts properly.
	1.4 Demonstrate controlled, even touch.
	1.5 Demonstrate speed and accuracy progress.
	1.6 Use correct fingering for the alphabetic, symbol keyboard.
	1.7 Center horizontally and vertically.
	1.8 Tabulate in multiple columns.

1.9 Keyboard on ruled lines.

1.10 Keyboard from handwritten material.

1.11 Comprehend proofreader's symbols.

1.12 Key interoffice memorandums

1.13 Key basic business letters

1.14 Key at reasonable speed with accuracy

2. Business letters.

2. Demonstrate how to type letters in the block style with open punctuation and center correctly.

2.1 Key straight-copy average difficulty paragraph material.

2.2 Key a rough-draft letter, proofread, and retype from rough-draft copy (arranged copy).

2.3 Keyboard a rough-draft letter, proofread, and rekey from rough draft (unarranged copy, longhand corrections).

2.4 Keyboard material in theme form.

2.5 Keyboard material centered on half sheet.

3. Tabulation.

3. **Demonstrate how to type tabulated material with varying numbers of columns and with columnar headings.**

   3.1 **Keyboard straight-copy average difficulty paragraph material.**

   3.2 **Keyboard a summary of tabulation rules in manuscript form.**

   3.3 **Keyboard three-column and four-column tables with heading, centered vertically and horizontally.**

   3.4 **Keyboard a three-column table with primary and columnar headings.**

   3.5 **Keyboard a three-column table with primary, secondary, and columnar headings; double underline; and footnote.**

   3.6 **Keyboard a two-column table with primary, secondary, and columnar headings; leaders; indentions; and footnote.**

   3.7 **Type a five-column and a seven-column boxed table with primary, secondary, and columnar headings.**

   3.8 **Keyboard tabulated material on an acceptable production level.**

4. Manuscripts/Reports.

4. Demonstrate ability to type manuscripts or reports with and without footnotes, bound and unbound.

   4.1 Keyboard straight-copy average difficulty paragraph material.

   4.2 Keyboard statistical rough-draft average difficulty paragraph material.

   4.3 Keyboard an unbound one-page manuscript without footnotes.

   4.4 Keyboard an unbound one-page manuscript from rough draft.

   4.5 Keyboard a one-page, leftbound manuscript with footnotes.

   4.6 Keyboard a leftbound manuscript of more than one page with footnotes and bibliography.

5. Microcomputer activities.

5. Demonstrate ability to operate an alphanumeric keyboard and ten-key pad with employable speed.

   5.1 Operate the alphanumeric keyboard by using the touch method.

   5.2 Start up and shut down the microcomputer.

   5.3 Operate special function keys on the microcomputer.

   5.4 Demonstrate ability to operate a printer, load paper, and print data.

6. Microcomputer.	6. Demonstrate the ability to arrange simple problem copy (business & personal letters, tabulations, manuscripts, outlines, and rough drafts) in correct form using vertical and horizontal centering on a microcomputer or word processor. 6.1 Load a program into the microcomputer from a data disk or cassette. 6.2 Proofread, correct errors, and make editorial changes in data presented on video display. 6.3 Save, retrieve, and update data.
7. Typewriting Application Skills	7. Demonstrate the ability to type or key simple business letters, tables, manuscripts and memoranda. 7.1 Keyboard from edited rough-draft material, medium-length letter. 7.2 Keyboard from edited rough-draft material short tables. 7.3 Keyboard a two-page manuscript with footnotes, a title page, and bibliography. 7.4 Keyboard from edited rough-draft material one medium-length memoranda.

8. Leadership.

8. Recognize the responsibilities of a leader and the importance of cooperation in a group setting.

   8.1 Explain the purposes and goals of a national student organization.

   8.2 Describe the organizational structure of the organization.

   8.3 Conduct a local election and describe officer duties.

   8.4 Explain the functions of an Advisory Council.

   8.5 Identify the resource publications for a national student organization.

   8.6 Identify local public relations techniques.

   8.7 Identify committee needs and understand committee purposes.

CONTENT STANDARDS
FOR
BUSINESS AND OFFICE EDUCATION
07.9999 Business and Office, Other
Exploratory Business

07.9999 Business and Office, Other -- any instructional program in business and office that prepares individuals for a variety of activities in planning, organizing, directing, and controlling all business office systems and procedures.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Self-Awareness	1. Describe the importance of interpersonal relationships.
	1.1 Demonstrate an appreciation of one's own skill, interest, feeling, and values.
	1.2 Describe personal strengths and weaknesses.
	1.3 Develop a plan for improving personal and work skills.
	1.4 Relate personal and work skills to career choices.
2. Decision-making.	2. Demonstrate the importance of decision-making.
	2.1 Develop an awareness of the results of decisions which will give one a sense of control over the future.

3. Motivation for work/Why people work.	3. Describe relationships between responsibilities and rewards in work and leisure. 3.1 Select an occupation of interest and identify personal human needs 3.2 Explain ways in which the occupational choice will fulfill his/her personal needs.
4. Occupational exploration.	4. Identify qualifications or prerequisites for employment in the following clusters. 4.1 Develop sources of job information. 4.2 Summarize information relating to educational requirements, skills, and salary. 4.3 Identify jobs within the occupational cluster. 4.4 Research employment opportunities. 4.5 Select a career of primary interest and explain why career was chosen. 4.6 Plan high school course and determine post-secondary education for career choice.

5. Tools of the working world.	5. Develop capabilities for making effective use of resources. 5.1 Identify uses of social security numbers. 5.2 Discuss acceptable application forms. 5.3 Discuss the steps necessary in opening a bank checking account. 5.4 Plan a realistic saving program based upon earnings. 5.5 Identify personal goals and needed restraints on the use of credit.
6. Computer literacy in career awareness.	6. Describe the effects of computers in the world of work. 6.1 Explain the importance of computers in one's life. 6.2 Describe ways in which computers contribute to education. 6.3 Describe ways in which computers affect daily activities. 6.4 Explain why computers will be important to the working citizen. 6.5 Explain why computer literacy is needed to progress in your career.

7. Business machine orientation.	7. Manipulate office machines at the acquaintance level. 7.1 Demonstrate how to operate a keyboard with the touch method at the awareness level. 7.2 Demonstrate how to operate the alphanumeric keyboard with special keys using the touch method at the awareness level.
8. Business Data Application	8. Develop a knowledge of microcomputer activities in Business Data Processing. 8.1 Demonstrate knowledge and proper usage of parts of the microcomputer. 8.2 Retrieve data from sequential and direct access files. 8.3 Sort data from routine menus. 8.4 Enter and read data in a specific file. 8.5 Enter, merge, and calculate data in the payroll file. 8.6 Enter, process, and retrieve data.

8.7 Identify steps involved in checkbook maintenance and use data from a checkbook register and monthly bank statement to prepare a bank reconciliation statement.

9. Organization.

9. Recognize the responsibilities of a leader and the importance of cooperation in a group setting.

9.1 Explain the purposes and goals of a national student organization.

9.2 Describe the organizational structure of the organization.

9.3 Conduct a local election and describe officer duties.

9.4 Explain the functions of an Advisory Council.

9.5 Identify the resource publications for a national student organization.

9.6 Identify local public relations techniques.

9.7 Identify committee needs and understand committee purposes.

Consumer, Personal and Miscellaneous Services (Cosmetology)

Content Standards

WILLIAM B. KEENE, State Superintendent

THE DELAWARE DEPARTMENT OF PUBLIC INSTRUCTION

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CONTENT STANDARDS
FOR
CONSUMER, PERSONAL AND MISCELLANEOUS SERVICES
12.0403 Cosmetology

12.0403 Cosmetology -- an instructional program that prepares individuals to care for and beautify hair, complexion, and hands by giving shampoos, rinses, and scalp treatments, styling, setting, cutting, dyeing, tinting, permanent waving, and bleaching hair; and giving facials, manicures, and hand and arm massages, with emphasis on hygiene, sanitation, customer relations, and salon management. Instruction qualifies student for licensing examinations.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be able to:
1. Preparation of patron.	1.1 Prepare patron for dry service using sanex neck strip and cloth cape.
	1.2 Drape patron for chemical (wet) service using sanex neck strip, towel and plastic cape.
	1.3 Protect the patron from spillage and ruin by draping properly for the expected service and draping cape over back of chair to avoid water running in seat.
2. Permanent curling/waving (chemical cold waving/curling).	2.1 Apply and complete a chemical cold wave to hair that is naturally straight using: a. Low PH acid preparation. b. Alkaline preparation. c. Heatwave (i.e. uniperm).

Permanent curling/waving (chemical cold waving/curling) cont'd.	2.2	Apply and complete a curl reformation process to hair that has an unruly or excessive curl configuration.
	2.3	Select rod size, sectioning and wrapping technique, procedure and product according to expected results and analyzed conditions.
	2.4	Select, apply and process a chemical wave to hair that is tinted or frosted.
	2.5	Follow manufacturers directions.
3. Mens haircutting/hair styling & hair care.	3.1	Analyze the hair, scalp and facial features while ascertaining the needs, techniques, and procedures to be employed.
	3.2	Choose tools, (equipment) procedures and techniques based on needs of operator and desires of patrons services.
	3.3	Perform hair care and grooming services to male patron according to patrons expressed desires, results and effect expected.
4. Make-up.	4.1	Correct facial feature defects or distortions, skin color and color imperfections by the application of make-up techniques.
	4.2	Apply make-up for fashion and fad.

Make-up cont'd.

4.3 Apply make-up that improves and enhances the appearance and pleases the customer.

4.4 Apply make up to disguise.

4.5 Apply theatrical make up for drama and purpose.

4.6 Apply corrective make up techniques.

5. Manicure/pedicure.

5.1 Administer a plain manicure to beautify the nails.

5.2 Administer a hot oil manicure to treat dry hands and nails.

5.3 Administer a booth manicure for confined persons.

5.4 Administer a pedicure to the feet, and toe nails without discomfort.

5.5 Shape and design nails.

5.6 Mend damaged or broken nails.

5.7 Repair smudged nails.

5.8 Administer hand and food massage to soothe the patron, treat the skin of the hands, feet and arm to increase circulation and please the patron.

6. Lash and brow tint.	6.1	Follow manufacturers directions when tinting or lightening sensitive areas around the eyes.
	6.2	Using only special lash and brow tint, color eyelashes and eyebrows by lightening or tinting.
7. Hairstyling.	7.1	Design hairstyles using rollers, blowdry styling, fingerwaves, pincurl peacement, hair shaping.
	7.2	Design pincurls that are round, without fishhook ends.
	7.3	Design fingerwaves that have uniform size grooves and well defined ridges.
	7.4	Select and execute hairstyles using any one or combination of the methods previously employed with increased speed, accuracy.
	7.5	Direct, mold, shape, backcomb hair for form, movement, design and style.
8. Shampooing/rinsing.	8.1	Analyze the hair and scalp to determine needs.
	8.2	Cleanse hair and scalp using selected specialty and organic shampoos.
	8.3	Choose and use shampoo products economically, wisely and safely.

9. Thermal curling/styling/waving.

9.1 Curl naturally straightened, wavy or kinky hair rendered straight using temperature controlled electric irons.

9.2 Curl naturally straight hair, wavy or kinky hair rendered straight using marcel irons of various sizes, heated in a heating device.

9.3 Wave hair using electric temperature controlled curling iron or marcel iron heated in a heating device.

10. Hair shaping.

10.1 Select tools, techniques and implements to best accomplish hair shaping tasks.

10.2 Cut, shape or remove bulk from the hair using any one or a combination of shaping implements, tools and techniques.

10.3 Design hairstyles while employing guidelines, elevations and guide angles.

11. Hair straightening (a chemical process).

11.1 Simulate the application of a creme type emulsion using a hair color brush, back or comb and/or fingers.

11.2 Apply an emulsion type chemical to hair without touching the scalp.

11.3 Remove excessive curl from naturally straight hair that has been chemically curled by the use of cold wave solution. (Ex. ammonium thioglycolate) or with cold wave solution made into an emulsion by adding it to a conditioning creme.

Hair straightening (a chemical process)cont'd.

11.4 Using a commercially prepared (1) acid (no ammonia) (2) alkaline (thio) creme type chemical preparation follow manufacturers directions and remove:

- a. approximately 75 90% of curl (straightening).
- b. approximately 40 70% of curl (relaxing).

11.5 Neutralize, stabilize or fix straightened or relaxed hair into its new state.

11.6 Remove excess curl from super curly hair using a more liquid type commercial preparation (ex. vigoral).

11.7 Follow manufacturers directions for application (selection, application and safety).

12. Safety.

12.1 Give a pre dispostion test and check for negative results before applying color.

12.2 Give a strand test and check for color results.

12.3 Give a test curl to test for curl development when giving a cold wave.

12.4 Give a hair and scalp analysis before any service to prevent injury, infection or hair or skin damage.

Safety cont'd.	12.5	Prepare a record card for all services performed.
	12.6	Rotate stock and prepare all preparations carefully.
	12.7	Read and follow manufacturers' directions.
	12.8	Wash hands before and after every patron.
	12.9	Check all electrical equipment.
	12.10	Properly label all supplies.
13. Remove natural pigment from the hair (bleaching) prepare the hair for further color services.	13.1	Lighten virgin hair to the correct stage for a toner in various series.
	13.2	Lighten a patron's hair using any one of the dimensional highlightening techniques.
	13.3	Following the rules of color selection and application, do a strand test.
	13.4	Do a lightening retouch application to new growth.

	13.5	Lift natural pigment.
	13.6	Pre soften hair for degrees of porosity.
	13.7	Choose, prepare and apply the most effective bleaching agent, process and procedure for the reasons, effects and results expected.
14. Hair coloring.	14.1	Apply temporary color rinses to the hair that color slightly and are easily removed.
	14.2.	Apply semi-permanent tint colors to he hair that last approximately 6 - 8 shampoos.
	14.3	Apply vegetable tints to the hair that coat the hair, build upon the shaft and are not easily removed.
	14.4	Apply permanent hair color to the hair that remains until the hair replaces itself.
	14.5	Apply permanent hair color: 1. for a slight change to either lighten or darken using a single process application. 2. to retouch new growth. 3. to tone lightened hair.

Hair coloring cont'd.	14.6	Apply a toner to lightened hair in various series.
	14.7	Follow manufacturers directions for color selection and mixing. Follow safety precautions listed in manufacturers directions.
15. Sanitation/sterilization.	15.1	Prepare sanitation and sterilization agents according to the manufacturers directions.
	15.2	Maintain and retain tools, equipment and implements in a sanitary state until ready to use.
16. Facial massage.	16.1	Select and apply packs and masks that stimulate or soothe the patron, increase circulation and/or treat the skin in a safe manner.
	16.3	Choose tools, materials and techniques to adequately, safely and effectively accomplish the facial/massage task.
17. Conditioning/reconditioning.	17.1	Analyze hair and scalp to determine condition.
	17.2	Administer hair brushing to remove tangles and debris, to stimulate the scalp and increase blood circulation.
	17.3	Treat diagnosed hair and scalp conditions using a variety of methods.

	17.4	Differentiate between diseases and common disorders of the scalp and hair to avoid contamination and infection.
18. Hair removal.	18.1	Select eyebrow shape according to customer's desires and accepted standards of style, design and technique for removal.
	18.2	Select methods, tools and techniques to safely accomplish the removal of superfluous hair from sensitive areas.
	18.3	Remove hair using recommended methods.
19. Skin care.	19.1	Analyze the skin to ascertain skin care needs.
	19.2	Apply facial packs and masks for diagnosed skin conditions.
	19.3	Massage and manipulate the skin to increase blood circulation, soothe or stimulate the patron and tone the skin.
	19.4	Treat the skin with a creme, oils, moisture (steam) or electrodes for special and specific needs.
	19.5	Tone the skin.

19.6 Treat the skin and underlying tissues with high frequency, assorted electroids, electric current, dermal or ultra violet light.

20. Hair straightening (temporary).

20.1 Temporarily remove curl, kink, frizz, wave from the hair using:

a. electric temperature controlled pressing comb.

b. manually heated pressing comb heated in a heating device.

20.2 Demonstrate precautions in using tools which might burn or scorch the patron or the hair.

CONTENT STANDARDS
FOR
CONSUMER, PERSONAL, AND MISCELLANEOUS SERVICES
12.0403 Cosmetology
(Science Related Theory)

12.0403 **Cosmetology -- an instructional program that prepares individuals to care for and beautify hair, complexion, and hands by giving shampoos, rinses, and scalp treatments, styling, setting, cutting, dyeing, tinting, permanent waving, and bleaching hair; and giving facials, manicures, and hand and arm massages, with emphasis on hygiene, sanitation, customer relations, and salon management. Instruction qualifies student for licensing examinations.**

Program Objective	Standard of Student Expectation
The program will provide instruction in:	**The student will be expected to:**
1. Identify and refer to words as they related to the practice and science of cosmetology arts and science.	1.1 **Define cosmetology vocabulary terms as to correct spelling and meaning.** 1.2 **Identify and use professional terms as they pertain to the practice and science of cosmetology.**
2. Personal development.	2.1 **Identify, describe and/or list at least six characteristics of personal hygiene.** 2.2 **List the components of personal development.** 2.3 **Exhibit a favorable visual projection by improved dress, attitude and manner.** 2.4 **Formulate a code of behavior for personal development.**
3. Trade and career orientation.	3.1 **List the traits and qualities necessary in order to ensure a successful career in cosmetology.**

	3.2	Develop a resume in pursuit of a job.
	3.3	List State board of Cosmetology and Barbering, State Board of Health, State law requirements and regulations as they pertain to the practice of Cosmetology in the State of Delaware.
	3.4	Research, describe and explain job opportunities in the field of cosmetology and related occupations.
4. Bacteriology, sterilization, sanitation.	4.1	List and describe the general forms of bacteria.
	4.2	List, describe and explain those diseases most likely to occur in the cosmetology environment due to these general forms of bacteria.
	4.3	List safety and sanitary measures that must be taken to prevent bacterial infection and contamination.
	4.4	List vocabulary words, and define terms common to the field of bacteriology and the practice of sanitation and sterilization.
	4.5	List the properties of a disinfectant.
	4.6	Compare those chemicals available to the professional that are used to kill bacteria vs. those ued ot retard the growth of bacteria and explain when and where best used.

5. Anatomy and physiology.	5.1	List and describe the systems of the body, their organs and functions.
	5.2	Identify and list the muscles, bones, nerves, and arteries of the head, face, neck, upper and lower extremities.
	5.3	Identify and list pressure (motor) points of the face and the areas affected.
	5.4	Identify and describe the structure, types and functions of cells, tissues, and organs.
	5.5	Identify how different types of cells reproduce and metabolize.
	5.6	Define anatomy and physiology.
	5.7	Describe the importance of blood to body functions and explain how and where blood is formed and circulates.
6. Hair (trichology).	6.1	List, label, describe and or explain types, composites and functions of hair.
	6.2	Give an overview of the subject of hair.
7. Hair and scalp analysis.	7.1	Identify lesions or abrasions of the scalp to avoid injury or infection.
	7.2	Identify conditions, diseases and common disorders of the hair and scalp and record the conclusions.

7.3 Using the sense of sight, feel, smell and hearing, perform an analysis of the hair and scalp preliminary to additional services.

8. Shampooing/rinsing.

8.1 Describe the shampoo molecule.

8.2 Explain, in terms of their chemistry and Ph, the difference in soap and soapless shampoos.

8.3 List the types of shampoos used professionally today.

8.4 Describe the expected effects of each type of shampoo used professionally today.

8.5 Explain the types of water and effects of water upon the shampoo/rinsing process.

8.6 Describe the chemistry of water.

8.7 List tools, equipment and supplies necessary to accomplish the shampoo/rinsing process.

8.8 List and explain the preliminary preparation and the procedure for shampooing and rinsing.

8.9 Explain in writing a brief over view of how hair reacts to each type of shampoo process. and/or procedure.

8.10 List safety precautions necessary to the shampooing process.

8.11 Explain the effects of a good shampoo.

8.12 Explain the reasons for thorough rinsing, and describe products that enhance the rinsing process.

9. Bleaching/lightening.

9.1 List and describe the types of bleaching agents available for professional use.

9.2 List, compare and describe the stages of lightening that hair goes through.

9.3 Compare toning products appropriate to the various stages of lightening.

9.4 List, define and describe the technical terms used to accomplish the hair lightening process.

9.5 Describe tint removers and their effects upon the hair and hair services.

9.6 Explain in writing when spot lightening is required and how it is accomplished.

9.7 Describe in writing how color coating and permanent color are removed from the hair.

10. Haircoloring/tinting.

10.1 Record results of hair and skin tests.

10.2 Compare the available types of hair color products, their chemistry, and their ability to color the hair.

10.3 Appraise the ability or inability to remove color from, in, or on the hair.

10.4 List the types of hair coloring products available, their ability to color and their effects upon the hair.

10.5 Describe the nature of the developer (H2O2) and how to protect its potency.

10.6 List technical terms used to refer to the hair coloring process.

10.7 Describe the chemistry of each type of hair product.

10.8 List and explain safety measures necessary to effectively and safely color hair.

11. Chemical (permanent waving).

11.1 List steps necessary to avoid injury to the patron and damage to the hair while chemical waving.

11.2 Describe the chemistry of chemical waving products and the effects of these chemical upon virgin hair/tinted hair.

Chemical (permanent waving) cont'd.

11.3 Explain the effects of the chemical wave process upon the bonds of the hair.

11.4 Differentiate between the products and the effects of alkaline wave solutions and the newer low ph waving solutions.

11.5 List and describe equipment and supplies used in the cold wave process.

11.6 Describe the difference between the chemical curling/waving process products, techniques and procedures when giving a:

- a. curl reformation process to kinky/super curly hair.
- b. cold wave to straight hair.

11.7 Explain the effects of and procedure for neutralizing cold waving processes.

12. The skin (histology).

12.1 List by name and function the histology of the skin.

12.2 List, describe and/or explain the appendages of the skin, their structure and function.

12.3 List and define technical terms common to skin conditions, disorders, diseases and chemistry.

	12.4	Identify by analysis conditions of the skin that may be worked on, over or treated by the cosmetologist.
	12.5	Identify by analysis, conditions of the skin that should not be treated by the cosmetologist.
	12.6	Describe accepted treatments that a costmetologist may employ for common skin problems most often encountered in the beauty shop.
13. Facial massage/skin care (bioesthegenics).	13.1	Identify muscles, bones, and nerves affected by massage.
	13.2	List safety measures that must be taken to protect the patron during the facial massage.
	13.3	List and describe the technical terms for the massage movements employed in facial massage.
	13.4	State the benefits of facial massage.
	13.5	List precautions that must be taken to avoid injury or infection.
	13.6	List types of organizations, and products needed to accomplihs the facial massage task.
	13.7	Describe the available types of facia packs and masks as to their composition and effects upon the skin.

14. Disease & disorders of skin, hair, nails & hands.

14.1 List irregularities and conditions of the hair, nail, hand and skin that may be worked on or over by the cosmetologist.

14.2 List by spelling and defining the common diseases and disorders of the hair, skin, nail and hand that must be treated by a physician or dermatologist.

14.3 Identify the symptoms of the common diseases and disorders of the hand, hair, nail and skin.

14.4 List the procedures that may be employed by the cosmetologist to treat common disorders of the hand, nail, skin and hair.

15. Chemistry/biochemistry.

15.1 Define chemistry.

15.2 Explain how chemistry relates to the study of cosmetology.

15.3 Define biochemistry.

15.4 Explain how the study of biochemistry wil enhance the understanding of cosmetology procedures and practices.

15.5 Identify, examine, categorize and appraise those units of biochemistry that relate to and affect the practice of cosmetology.

15.6 Identify the parts of a microscope.

15.7 Examine hair, blood and skin samples under the microscope.

15.8 Identify and explain:

- a. mixtures.
- b. physical and chemical changes.
- c. ph scale.
- d. acids, bases, salts.
- e. solutions.
- f. cosmetics for the hair and skin.
- g. chemistry or sterilization.

15.9 List products used in the beauty shop.

15.10 List steps and measures necessary to ensure safe use of chemical preparations.

16. Color facts (chromatics)

16.1 Identify terms and vocabulary particular to color and color theory.

16.2 List and describe the effects of light and color on the hair and skin.

16.3 Explain why and how we see color.

16.4 Describe the color wheel.

16.5 List the primary colors of the spectrum.

	16.6	List the secondary colors.
	16.7	Explain how to neutralize unwanted colors.
	16.8	Identify, describe and define the distinct color characteristics of hue, intensity, value, undertone, shade. tint and tone.
17. Electricity.	17.1	Define electricity.
	17.2	Identify types of current, used in the beauty shop, their function, use and effects.
	17.3	List the types of electric tools and implements used in the beauty shop, their use, and how to safely care and clean.
	17.4	List and describe the type of lighting used in the beauty shop.
18. Salon management.	18.1	Plan a physical layout of a shop.
	18.2	List the characteristics of a good manager.
	18.3	Take inventory of personal appearance and personality improvement.
	18.4	Develop an advertising strategy for a small/large shop.
	18.5	Compare the pay benefits of commissions vs. salary vs. booth rental.

18.6 Prepare records of income and disbursements.

18.7 Prepare customer information card; include personal information as well as shop services.

18.8 List the traits of good telephone techniques.

18.9 Prepare an appointment book, scheduling appointments based on service desired and time needed per service.

18.10 Prepare a lease agreement.

18.11 Describe the different types of insurance needed and/or available to the beauty shop and list the advantages or disadvantages of each type.

19. Metric.

19.1 Calculate length, volume and weight in metric.

19.2 Convert Fahrenheit degrees to Celsius degrees.

19.3 Refer tp therometric equivalents in terms of Celius to Fahrenheit scales.

20. Vocational student organization membership.	20.11	Identify the advantages of participating in Vocational student organizations.
	20.2	Participate as a member of a Vocational student organization.
21. Development of leadership skills through VSO and related activities.	21.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

a. Punctuality.

b. Confidentiality.

c. Honesty.

d. Cooperation.

e. Cleanliness of self and work place.

f. Productivity.

g. Communication.

h. Completion of tasks.

i. Positive attitudes and enthusiasm toward the job.

Industrial Arts

Content Standards

LIBERTY AND INDEPENDENCE

WILLIAM B. KEENE, State Superintendent

THE DELAWARE DEPARTMENT OF PUBLIC INSTRUCTION

ACKNOWLEDGEMENTS

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Industrial Arts and Related Occupational Programs

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CONTENT STANDARDS
INDUSTRIAL ARTS
21.0101 Industrial Arts, General

21.0101 Industrial Arts, General -- an instructional program that provides the student with general exploratory experiences and insights into trade and industrial career opportunities so tht the individual can make meaningful occupational and educational choices. Instruction is provided in using tools, equipment, materials, and products associated with industry and technology; role playing in simulated enterprises associated with a number of career areas; studying and analyzing the materials, products, processes, problems, uses, developments, and contributions of many of the elements in various career areas; studying the organization of numerous industries and businesses while experiencing typical aspects of many; and researching, planning, designing, constructing, evaluating, and generalizing in association with problems, projects related various careers.

Program Objectives	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. The use of shop safety procedures.	1.1 Obey all safety rules as outlined in the Delaware Safety Manual for Vocational Education Programs.
	1.2 Perform activities in a safe manner as outlined in the DSMFVE.
	1.3 Wear eye protection as required by standards in the DSMFVE.
	1.4 Identify the location of all safety equipment in the classroom.
	1.5 Demonstrate the proper use of all safety equipment in the class area, according to procedures outlined in the DSMFVE or manufacturer's recommendation.
	1.6 Demonstrate safe work habits and cooperative attitudes during class activities.

2. Proper techniques in the use and care of equipment.	2.1	Identify basic parts of equipment and describe its use according to manufacturer's directions.
	2.2	Demonstrate proper procedure in the set-up and use of shop equipment as specified in the manufacturer's manual.
	2.3	Demonstrate proper methods/procedures in cleaning, preventive maintenance and storage of shop equipment, following manufacturer's guidelines.
3. The application of problem solving skills.	3.1	Identify a problem.
	3.2	Apply specific questions which lead to the clarification/solution of the stated problem.
	3.3	Identify alternative paths of action which may result in a solution to the problem.
	3.4	Organize known information into an identifiable path to the solution of a problem.
	3.5	Identify solutions to a problem.
4. The systems of technology as they relate to the evolution, utilization, and their significance; and of industry, its organization, personnel, professional and manufacturing techniques, resources, and products; and their social/cultural impact.	4.1	Identify the systems of Industry and technology as they apply to communication, construction, manufacturing and
	4.2	Identify and describe the relationship of service between the productive system and the customer.

	4.3	Identify the role of competent and responsible technologically literate people as they carry out their daily functions as an informed consumer, user and citizen.
	4.4	Identify and describe careers associated with American industry.
	4.5	Perform selected primary and secondary materials processing activities to produce a usable object.
	4.6	Identify and describe the common processes used by industry to produce goods and products.
	4.7	Identify and describe selected industrial materials.
5. Vocational student organization membership.	5.1	Identify the advantages of participating in vocational student organization.
	5.2	Participate as a member of a vocational student organization.
	5.3	Participate regularly in chapter meetings and activities at the state and local levels.
	5.4	State the purposes of the organization.
	5.5	Recite the Creed and interpret it.

6. Development of leadership skills through VSO and related activities.

6.1 Demonstrate leadership development in:

a. Social and interpersonal skills.

b. Oral and written communication.

c. Organization and management skills.

d. Civic responsibilities.

e. Parliamentary procedures.

CONTENT STANDARDS
INDUSTRIAL ARTS
21.0102 Construction

21.0102 Construction -- an instructional program that prepares individuals for enrollment in advanced vocational and technical education programs and includes occupational and basic technical information and laboratory experiences directly related to current practices in the construction industry. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. Individuals are provided with the information and basic skills concerned with erection, installation, maintenance, or repair of residential and industrial structures. Instructional activities are centered around building structures using a variety of construction materials and processes involving design, masonry, capentry, electricity, sheet-metal and plumbing.

Program Objectives	Standard of Student Expectation:	
The program will provide instruction in:	The student will be expected to:	
1. The use of shop safety procedures.	1.1	Obey all safety rules as outlined in the Delaware Safety Manual for Vocational Education Programs.
	1.2	Perform activities in a safe manner as outlined in the DSMFVE.
	1.3	Wear eye protection as required by standards in the DSMFVE.
	1.4	Identify the location of all safety equipment in the classroom.
	1.5	Demonstrate the proper use of all safety equipment in the class area, according to procedures outlined in the DSMFVE or manufacturer's recommendation.
	1.6	Demonstrate safe work habits and cooperative attitudes during class activities.

2. Proper techniques in the use and care of equipment.	2.1	Identify basic parts of equipment and describe its use according to manufacturer's directions.
	2.2	Demonstrate proper procedure in the set-up and use of shop equipment as specified in the manufacturer's manual.
	2.3	Demonstrate proper methods/procedures in cleaning, preventive maintenance and storage of shop equipment following manufacturer's guidelines.
3. The application of problem solving skills.	3.1	Identify a problem.
	3.2	Apply specific questions which lead to the clarification/solution of the stated problem.
	3.3	Identify alternative paths of action which may result in a solution to the problem.
	3.4	Organize known information into an identifiable path to the solution of a problem.
	3.5	Identify solutions to a problem.
4. The major concepts associated with each of the major content elements as well as interrelationships of selected management and production elements.	4.1	Compare construction technology to the broader context of industry and technology by listing five new technological contruction changes effecting industry in in the last year.

4.2 Perform selected management practices in planning directing, and controlling as they relate to construction production systems by working on the construction site in each of the different roles.

4.3 Perform selected industrial relations practices as they relate to a managed production system in construction by working on the construction site in each of the different roles.

4.4 List and explain different production and/or servicing practices as they apply to construction.

4.5 Describe explaining the interrelationship between construction and the environment, individuals, and society.

4.6 Select a product and demonstrate the tools and materials utilized in its construction.

4.7 List careers in construction technology..

4.8 Write a report comparing the significance of construction industry and technology in past, present, and future.

4.9 Demonstrate the ability to function as a member in a group by working on the construction site.

5. Vocational student organization membership.	5.1	Identify the advantages of participating in vocational student organization.
	5.2	Participate as a member of a vocational student organization.
	5.3	Participate regularly in chapter meetings and activities at the state and local levels.
	5.4	State the purposes of the organization.
	5.5	Recite the Creed and interpret it.
6. Development of leadership skills through VSO and related activities.	6.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
INDUSTRIAL ARTS
21.0103 Drafting and Design

21.0103 Drafting and Design -- an instructional program that prepares individuals for enrollment in advanced vocational and technical education programs and includes occupational and basic technical information and laboratory experiences directly related to drafting in industry. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. Instructional activities involve lettering, freehand sketching, orthographic projection, geometric construction, dimensioning, sectioning, reproduction, pictorial drawing and auxiliary views using technical drawing instruments and techniques.

Program Objectives		Standard of Student Expection
The program will provide instruction in:		The student will be expected to:
1. The use of shop safety procedures.	1.1	Obey all safety rules as outlined in the Delaware Safety Manual for Vocational Education Programs.
	1.2	Perform activities in a safe manner as outlined in the DSMFVE.
	1.3	Wear eye protection as required by standards in the DSMFVE.
	1.4	Identify the location of all safety equipment in the classroom.
	1.5	Demonstrate the proper use of all safety equipment in the class area, according to procedures outlined in the DSMFVE or manufacturer's recommendation.
	1.6	Demonstrate safe work habits and cooperative attitudes during class activities.
2. Proper techniques in the use and care of equipment.	2.1	Identify basic parts of equipment and describe its use according to manufacturer's directions.

	2.2	Demonstrate proper procedure in the set-up and use of shop equipment as specified in the manufacturer's manual.
	2.3	Demonstrate proper methods/procedures in cleaning, preventive maintenance and storage of shop equipment following manufacturer's guidelines.
3. The application of problem solving skills.	3.1	Identify a problem.
	3.2	Apply specific questions which lead to the clarification/solution of the stated problem.
	3.3	Identify alternative paths of action which may result in a solution to the problem.
	3.4	Organize known information into an identifiable path to the solution of a problem.
	3.5	Identify solutions to a problem.
4. The systems used by manufacturing and design enterprises to design, develop, and engineer products; emphasis placed on an activity-centered study of the specific tasks associated with design problem identification.	4.1	Identify the functions and task of research, development and product engineering.
	4.2	Demonstrate and use the design process.
	4.3	Differentiate between consumer and production design orientation.
	4.4	Conceptualize, develop and communicate a product design.

4.5 Develop a data for designing a specific product.

4.6 Design a product with consideration for function, selling, and manufacture.

4.7 List career opportunities in design fields.

5. The drafting activities of lettering, freehand sketching, orthographic projection, geometric constructions, dimensioning, sectioning, pictorial drawings, auxiliary views using technical drawing instruments and techniques of both the mechanical and architectural drafting fields.

5.1 Produce professional type lettering, accurately and legibly.

5.2 Produce a proportional and accurate freehand sketch of an object, as determined by teacher.

5.3 Construct geometric shapes using drafting instruments, neatly and accurately.

5.4 Produce working drawings showing full dimensioned objects, accurately, neatly, technically correct.

5.5 Show the internal areas of an object by the use of a section view, technical drawings of the different sectioning methods.

5.6 Further explain an objects shape by use of an auxiliary view and detail enlargement by drawing different auxiliary views detailed enlargements.

5.7 Develop an understanding of orthographic projection needed for industrial production by listing industrial products and explain how orthographic projection is used in manufacturing.

	5.8	Demonstrate an understanding of pictorial projection needed for illustrating an overall view of an object, by completing drawings of the different pictorial projecting methods.
	5.9	Plan and complete an architectural floor plan and elevation by designing and drawing a structure to industrial standards.
6. Vocational student organization membership.	6.1	Identify the advantages of participating in vocational student organization.
	6.2	Participate as a member of a vocational student organization.
	6.3	Participate regularly in chapter meetings and activities at the state and local levels.
	6.4	State the purposes of the organization.
	6.5	Recite the Creed and interpret it.
7. Development of leadership skills through VSO and related activities.	7.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
INDUSTRIAL ARTS
21.0104 Electricity/Electronics

21.0104 Electricity/Electronics -- an instructional program that prepares individuals for enrollment in advanced vocational and technical education programs and includes occupational and basic technical information and laboratory experiences directly related to electricity and electronics. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. Individuals are provided with the fundamentals of the theory, measurement, control, and applications of electrical energy. Instructional activities include reading instructions, interpreting schematics, setting up experimental apparatus, making measurements, testing circuits, and recording results.

Program Objectives	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. The use of shop safety procedures.	1.1 Obey all safety rules as outlined in the Delaware Safety Manual for Vocational Education Programs.
	1.2 Perform activities in a safe manner as outlined in the DSMFVE.
	1.3 Wear eye protection as required by standards in the DSMFVE.
	1.4 Identify the location of all safety equipment in the classroom.
	1.5 Demonstrate the proper use of all safety equipment in the class area, according to procedures outlined in the DSMFVE or manufacturer's recommendation.
	1.6 Demonstrate safe work habits and cooperative attitudes during class activities.

2. Proper techniques in the use and care of equipment.	2.1	Identify basic parts of equipment and describe its use according to manufacturer's directions.
	2.2	Demonstrate proper procedure in the set-up and use of shop equipment as specified in the manufacturer's manual.
	2.3	Demonstrate proper methods/procedures in cleaning, preventive maintenance and storage of shop equipment following manufacturer's guidelines.
3. The application of problem solving skills.	3.1	Identify a problem.
	3.2	Apply specific questions which lead to the clarification/solution of the stated problem.
	3.3	Identify alternative paths of action which may result in a solution to the problem.
	3.4	Organize known information into an identifiable path to the solution of a problem.
	3.5	Identify solutions to a problem.
4. The electrical/electronics theory, systems and application in residential, commercial and industrial structures including basic consumer knowledge.	4.1	Perform selected construction practices in installing and servicing electrical systems.
	4.2	Perform selected management practices; planning, organizing, directing, and controlling the installation, assembly and trouble-shooting of electrical systems within the construction, production process.

4.3 Demonstrate the interrelationships of management and production practices as they apply to the installation, assembly and trouble-shooting of electrical systems.

4.4 Analyze how tools, materials, and diagrams are utilized in the installation, assembly and servicing of mechanical and electrical systems.

4.5 List career opportunities in technologies related to electrical systems.

4.6 Explain resistance, capacitance, inductance and reactance as it effects a circuit.

4.7 Define the structure of matter, including molecules and atoms.

4.8 Solve basic house wiring problems.

4.9 Describe the function of insulators and conductors and name four of each.

4.10 Identify sources of electricity, including primary cells, light, heat, mechanical pressure and magnetism.

4.11 Identify the value of resistors by the color code.

4.13 Describe inductance and its effects on a circuit.

4.14 Describe the operation of a transformer and differences between step-up and step-down transformer.

4.15 Use and operate test equipment correctly.

4.16 Identify the components of a circuit and describe their function when given a schematic drawing.

4.17 Experiment in measurement, control and application of electrical energy.

4.18 Compute total resistance in the circuit, the voltage, and amperage at key points using OHM's law. This is to be done for both series, parallel and combination series parallel circuits.

5. Vocational student organization membership.

5.1 Identify the advantages of participating in vocational student organization.

5.2 Participate as a member of a vocational student organization.

5.3 Participate regularly in chapter meetings and activities at the state and local levels.

5.4 State the purposes of the organization.

5.5 Recite the Creed and interpret it.

6. Development of leadership skills through VSO and related activities.

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6.1 Demonstrate leadership development in:

a. Social and interpersonal skills.

b. Oral and written communication.

c. Organization and management skills.

d. Civic responsibilities.

e. Parliamentary procedures.

CONTENT STANDARDS
FOR
INDUSTRIAL ARTS
21.0105 Energy, Power, and Transportation

21.0105 **Energy, Power, and Transportation -- an instructional program that prepares individuals for understanding the energy, power, and transportation industries and occupations by utilizing exploratory experiences and laboratory activities. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. Instructional activities focus on the theory, maintenance, and servicing of machines and devices with emphasis on energy sources, small gas engines, basic electricity, and methods of transmitting power.**

Program Objectives	Standard of Student Expectation
The program will provide instruction in:	**The student will be expected to:**
1. The use of shop safety procedures.	1.1 **Obey all safety rules as outlined in the Delaware Safety Manual for Vocational Education Programs.**
	1.2 **Perform activities in a safe manner as outlined in the DSMFVE.**
	1.3 **Wear eye protection as required by standards in the DSMFVE.**
	1.4 **Identify the location of all safety equipment in the classroom.**
	1.5 **Demonstrate the proper use of all safety equipment in the class area, according to procedures outlined in the DSMFVE or manufacturer's recommendation.**
	1.6 **Demonstrate safe work habits and cooperative attitudes during class activities.**

2. Proper techniques in the use and care of equipment.	2.1	Identify basic parts of equipment and describe its use according to manufacturer's directions.
	2.2	Demonstrate proper procedure in the set-up and use of shop equipment as specified in the manufacturer's manual.
	2.3	Demonstrate proper methods/procedures in cleaning, preventive maintenance and storage of shop equipment following manufacturer's guidelines.
3. The application of problem solving skills.	3.1	Identify a problem.
	3.2	Apply specific questions which lead to the clarification/solution of the stated problem.
	3.3	Identify alternative paths of action which may result in a solution to the problem.
	3.4	Organize known information into an identifiable path to the solution of a problem.
	3.5	Identify solutions to a problem.
4. The history, production, and utilization of energy power and transportation systems and their effect on the environment and social and economic systems.	4.1	Demonstrate understanding of the historical development of energy, power, and transportation systems by writing reports, model.

4.2 Describe selected methods for producing energy and power systems.

4.3 Explain the relationship of selected energy, power and transportation system and the environment.

4.4 Describe selected 4 major types of each of energy, power and transportation.

4.5 Perform classroom/shop activities related to emergency power and transportation. i.e., Small internal combustion engine, maintenance repair/trouble shooting, model building, rocketry etc.

4.6 Identify career opportunities related to energy, power and transportation fields.

5. Vocational student organization membership.

5.1 Identify the advantages of participating in vocational student organization.

5.2 Participate as a member of a vocational student organization.

5.3 Participate regularly in chapter meetings and activities at the state and local levels.

5.4 State the purposes of the organization.

5.5 Recite the Creed and interpret it.

6. Development of leadership skills through VSO and related activities.

6.1 Demonstrate leadership development in:

a. Social and interpersonal skills.

b. Oral and written communication.

c. Organization and management skills.

d. Civic responsibilities.

e. Parliamentary procedures.

CONTENT STANDARDS
FOR
INDUSTRIAL ARTS
21.0106 Graphic Arts

21.0106 Graphic Arts -- an instructional program that prepares individuals for enrollment in advanced vocational and technical education programs by providing exploratory experiences and laboratory activities related to graphic arts. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. The program focuses on the fundamentals of graphic arts, including the study of information and skills concerned with graphic reproduction using the tools, material and processes of the printing industry. Instructional experiences inlcude designing, composing, printing, and evaluating reproduction techniques.

Program Objectives	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. The use of shop safety procedures.	1.1 Obey all safety rules as outlined in the Delaware Safety Manual for Vocational Education Programs.
	1.2 Perform activities in a safe manner as outlined in the DSMFVE.
	1.3 Wear eye protection as required by standards in the DSMFVE.
	1.4 Identify the location of all safety equipment in the classroom.
	1.5 Demonstrate the proper use of all safety equipment in the class area, according to procedures outlined in the DSMFVE or manufacturer's recommendation.
	1.6 Demonstrate safe work habits and cooperative attitudes during class activities.

2. Proper techniques in the use and care of equipment.	2.1	Identify basic parts of equipment and describe its use according to manufacturer's directions.
	2.2	Demonstrate proper procedure in the set-up and use of shop equipment as specified in the manufacturer's manual.
	2.3	Demonstrate proper methods/procedures in cleaning, preventive maintenance and storage of shop equipment following manufacturer's guidelines.
3. The application of problem solving skills.	3.1	Identify a problem.
	3.2	Apply specific questions which lead to the clarification/solution of the stated problem.
	3.3	Identify alternative paths of action which may result in a solution to the problem.
	3.4	Organize known information into an identifiable path to the solution of a problem.
	3.5	Identify solutions to a problem.
4. Technical processes and managerial activities related to the major areas of graphic communications.	4.1	Identify major areas of design, hot composition, cold composition, and production as associated with the printing industry.

4.2 Identify and use the materials and equipment associated with the graphic communications field as used in the printing industry.

4.3 Design, compose, print, and finish a printed product using a total printing process which will be acceptable to consumer standards.

4.4 Identify and discuss the purpose of the graphic communications industry.

4.5 Describe the way graphic communications affects personal life, the community, the state, and the nation in terms of social and economic impact.

4.6 Identify and discuss the job market potential of graphic communications as it applies to the local area.

5. Vocational student organization membership.

5.1 Identify the advantages of participating in vocational student organization.

5.2 Participate as a member of a vocational student organization.

5.3 Participate regularly in chapter meetings and activities at the state and local levels.

5.4 State the purposes of the organization.

5.5 Recite the Creed and interpret it.

6. Development of leadership skills through VSO and related activities.	6.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
INDUSTRIAL ARTS
21.0107 Manufacturing/Materials Processing

21.0107 **Manufacturing/Materials Processing** -- an instructional program that prepares individuals for enrollment in advanced vocational and technical education programs and includes operational and basic technical information and laboratory experiences directly related to the manufacturing processes used by the industry. The purpose of the programis to assist individuals in making meaningful occupational and educaitonal choices. Instructional activities focus on the study of the information and the basic skills concerned with industrial-techical materials and processes, including their properties and utilization as they are fabricated into usable products. Instructional activities involve hand and machine processes for the fabrication, analysis, or testing of metals, woods, and plastics.

Program Objectives	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. The use of shop safety procedures.	1.1 Obey all safety rules as outlined in the Delaware Safety Manual for Vocational Education Programs.
	1.2 Perform activities in a safe manner as outlined in the DSMFVE.
	1.3 Wear eye protection as required by standards in the DSMFVE.
	1.4 Identify the location of all safety equipment in the classroom.
	1.5 Demonstrate the proper use of all safety equipment in the class area, according to procedures outlined in the DSMFVE or manufacturer's recommendation.
	1.6 Demonstrate safe work habits and cooperative attitudes during class activities.

2. Proper techniques in the use and care of equipment.	2.1	Identify basic parts of equipment and describe its use according to manufacturer's directions.
	2.2	Demonstrate proper procedure in the set-up and use of shop equipment as specified in the manufacturer's manual.
	2.3	Demonstrate proper methods/procedures in cleaning, preventive maintenance and storage of shop equipment following manufacturer's guidelines.
3. The application of problem solving skills.	3.1	Identify a problem.
	3.2	Apply specific questions which lead to the clarification/solution of the stated problem.
	3.3	Identify alternative paths of action which may result in a solution to the problem.
	3.4	Organize known information into an identifiable path to the solution of a problem.
	3.5	Identify solutions to a problem.
4. The efficient and appropriate plan layouts, process selection and sequencing, materials handling system design, quality control procedures, production planning and control activities, work measurement practices and product manufacture.	4.1	Analyze a set of drawings, specification sheets and bills of materials to determine: a. The operations needed to produce a product. b. Specified quality standards. c. Material specifications.

	4.13	Select alternate materials that will meet product and consumer requirements.
	4.14	Prepare effective quality control incentive awards.
	4.15	List career opportunities in manufacturing/materials processing industries.
5. Vocational student organization membership.	5.1	Identify the advantages of participating in vocational student organization.
	5.2	Participate as a member of a vocational student organization.
	5.3	Participate regularly in chapter meetings and activities at the state and local levels.
	5.4	State the purposes of the organization.
	5.5	Recite the Creed and interpret it.
6. Development of leadership skills through VSO and related activities.	6.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

4.2 Differentiate between primary and secondary material processing activities.

4.3 Describe the major types of secondary material processing activities.

4.4 Utilize appropriate, measuring devices to inspect finished goods and products to determine adherence to specification.

4.5 Design and construct functional inspection devices for use in a class activity.

4.6 Describe the major properties of selected materials.

4.7 Perform selected tests to determine materials properties.

4.8 Perform selected primary and secondary material processing activities in the production of a product.

4.9 Compare material properties and processing activities to the larger context of industry and technology.

4.10 Determine material handling needs for a production system.

4.11 Sequence operations for efficient manufacture/production.

4.12 Develop a schedule for the manufacture of parts, subassemblies and final assemblies for a mass produced product.

Marketing and Distribution
Content Standards

WILLIAM B. KEENE, State Superintendent

THE DELAWARE DEPARTMENT OF PUBLIC INSTRUCTION

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CONTENT STANDARDS
FOR
08.9999 MARKETING AND DISTRIBUTION

08.9999 Marketing and Distribution -- A summary of groups of instructional programs that prepares individuals for occupations directed toward the incident to the flow of industrial and consumer goods in channels of trade, or the provision of services to consumers or users. These programs are concerned with marketing, sales, distribution, merchandising, and management, including ownership and management of enterprises engaged in marketing. Instructional programs prepare individuals to perform one or more of the marketing functions, such as selling, buying, pricing, promoting, financing, transporting, storing, market research, and marketing management. In addition, instructional programs including varying emphases on technical knowledge of products or services marketed, related communications and computation skills, and abilities and attitudes associated with human relations and private enterprise.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to :
Product and Service Technology - Level 1	
1. Product trends in specific career identification	1.1 Using a product, demonstrate knowledge of product trends by making a report concerning changes in the product or service.
	1.2 Describe current changes in product or service trends.

Product and Service Technology - Level 2

1. Product information from label, tags, customers, competitors, sales representatives and supervisors.

1.1 Demonstrate that product information can be obtainable from customers, competitors, sales representatives, producers, fellow employees and supervisors.

1.2 Identify all the major sources of product information on ten given questions relating to major sources.

Product and Service Technology - Level 3

1. Use of trade journals for the purpose of obtaining product information.	1.1 Demonstrate a positive attitude in obtaining information on current business trends. 1.2 Describe how and/or why trade journals are helpful to salespeople.
2. The provisions of the Federal Food, Drug, and Cosmetic Act. (FDA)	2.1 Explain how the customer is protected by FDA law. 2.2 Discuss laws which protect the customer.
3. Difference between standards and grade	3.1 Demonstrate a knowledge of the standards and grades associated with a specific product or service. 3.2 Identify the product or service that has been identified in the industry to compare products by quality, size, weight, content or performance on three items and classify them by standard and grade. (e.g. , Grades A, B, C, etc.)

Selling - Level 1

1. Selling as a profession and its important economic role in business.	1.1 Develop the attitude that one should give the best customer service with the customer always first in mind.
	1.2 Display an awareness of the importance of keeping customer interests in mind.
	1.3 Describe why one should fulfill promises made to customers.
	1.4 Demonstrate the belief that the job of selling contributes to the well-being of customers.
	1.5 Show an awareness of ways that customers benefit from the sales process.
2. Performing a retail sale.	2.1 Perform a retail sale using generally accepted steps in a logical order.
	2.2 Critique selling case studies using National DECA sales rating sheets.

Selling - Level 2

1. Need for quotas in selling	1.1 Demonstrate how each salesperson can attempt to meet sales quotas.
	1.2 Explain the importance of salespeople meeting sales quotas.
2. Importance of merchandise information.	2.1 Describe how merchandise information will enable the salesperson to increase sales as well as earning capacity.
	2.2 Give reasons why adequate merchandise information helps a salesperson to increase sales and, in turn, increase earning capacity.
3. Importance of the use of brand names.	3.1 Demonstrate skill in the ability to use brand or trade names to help customers identify and select products or merchandise.
	3.2 Demonstrate the ability to use a brand name by. (1) creating a favorable impression of the product in the customer's mind (2) building a reputation for a quality product and (3) encouraging the customer to remember the product for repeat sales.
4. Selling price.	4.1 Develop selling points from information on printed labels.
	4.2 Interpret selling points from the information on labels that can be used to build customer satisfaction.

5. The use of product substitution in selling.

5.1 List items that can be substituted for well-known products, what they are substitutes for and superior points of the substitutes.

5.2 Select situations that indicate what a salesperson should know or do in order to substitute a product which is not as well-known for one that is well-known.

Selling - Level 3

1. The importance of reading advertising.	1.1 Explain the values of advertising information.

Psychology and Human Relations - Level 1

1.	How to achieve results through others by practicing effective human relations.	1.1	Define human relations
		1.2	Explain in writing how a supervisor or manager can achieve results through others by practicing effective human relations.
		1.3	List specific human relations skills that a supervisor or manager needs.
2.	How to dress appropriately for the job and maintain a well-groomed appearance.	2.1	Recognize what is considered appropriate dress on the job.
		2.2	From a given list of distributive occupations, select occupations and describe appropriate dress for each.
		2.3	In each of the above occupatons explain why this dress would be appropriate.
3.	How to show an interest in others.	3.1	Display an awareness of the importance of showing interest in others.
		3.2	Describe ways that an interest in others could be shown in each situation.
4.	Morale - the term used to describe employee attitudes toward their jobs, employer, and fellow employees.	4.1	Display an understanding of morale as pertains to jobs, employer, and fellow employees.

	4.2 Define "employee morale".
	4.3 Identify employee behavior that would indicate high morale and those that would indicate low morale.
5. Ways to effectively handle difficult customers.	5.1 Demonstrate a comprehension of how to handle customers who are difficult. 5.2 List ways to effectively handle "difficult" customers. 5.3 Effectively handle a situation with a difficult customer.
6. Harmonious relationships with others.	6.1 Demonstrate skill in developing and maintaining harmonious relationships on the job or in school.
7. Working cooperatively with others.	7.1 Describe the importance of attitude in distributive occupations and how the ability to work cooperatively with others is necessary. 7.2 Identify the needs and motivations of the individuals involved in situations in order to work more cooperatively.

8.	Personality traits necessary for successful job performance.	8.1	Describe how an appreciation for and an understanding of traits is necessary for successful job performance.
		8.2	Define "personality".
		8.3	List personality traits that are necessary for effective job performance.
		8.4	Plan a self-development program.
		8.5	Practice self-development and record the progress made.
9.	Demonstrating initiative and creativity in working with people	9.1	Demonstrate an understanding of initiative and creativity in working with people.
		9.2	Identify situations relating to demonstrating initiative and creativity.
10.	Generating enthusiasm for helping people.	10.1	Describe the importance of enthusiasm in business as it relates to people, products and service.
		10.2	Write a correct definition of enthusiasm and list things that might cause enthusiasm in others.

	10.3 Explain and demonstrate ability to generate enthusiasm in others.
11. The knowledge that next to job performance, human relations is an employee's greatest responsibility.	11.1 Describe why the ability to get along well with others is important in the business world. 11.2 State reasons why it is a responsibility for an employee to develop and maintain good human relations. 11.3 List ways to accomplish the above.
12. The knowledge that honesty and integrity are personality traits.	12.1 Describe why honesty and integrity are important in the business world. 12.2 List activities that an honest employee would do in given job situations. 12.3 Give reasons why it is necessary for employees to demonstrate honesty and integrity in job situations.
13. The knowledge that good personal appearance helps create effective customer impressions.	13.1 Demonstrate an awareness of proper dress in effective human relations. 13.2 List risks that may be encountered when employees do not maintain good personal appearance.
14. The knowledge that good human relations depends on the personality factor and on the ability to adjust to personalities.	14.1 Demonstrate an understanding of the personality factors in business and the necessity for adjustments. 14.2 Describe one personality adjustment that each employee would need to make in order to work harmoniously with others.

Psychology and Human Relations - Level 2

1. Factors which appear to affect employee morale	1.1	Define the meaning of "morale".
	1.2	Describe high morale and low morale.
	1.3	List factors that could contribute to high morale.
2. How to be orderly and systemaic.	2.1	Recognize the traits of an orderly and systematic person.
	2.2	Choose correct definitions for the words "orderly" and "systematic".
3. The knowledge that a positive attitude is usually reflected in one's work.	3.1	Demonstrate an understanding of what constitutes a positive attitude.
	3.2	From a list of employee comments about work, correctly identify those that indicate positive attitudes.
	3.3	List reasons why it is important to maintain a positive attitude toward work.
4. The knowledge that employees will comply more readily with policies they understand.	4.1	Demonstrate the importance of clarity in writing policies for employees.
	4.2	Identify the responses that would most accurately complete policy statements.

5.	Exercising self-control during trying situations.	5.1	Identify situations that could be used to describe self control.
		5.2	Indicate constructive ways to exercise self-control in trying situations.
6.	How workers' satisfactory job performance influences other people.	6.1	Describe how a worker's influences on others is as important as the job performed.
7.	The knowledge that understanding others and one's self is basic to working harmoniously together.	7.1	Demonstrate how working together effectively entails understanding others.
		7.2	Select those situations that indicate the attitude that understanding others and one's self is basic to working harmoniously together
8.	The knowledge that good human relations help increase productivity.	8.1	Discuss how interest and creativeness in employees may increase production.
		8.2	Describe how human relations help increase production by stimulating interest and creativeness in employees.
		8.3	Identify results of good human relations within a business.
9.	How employee morale is influenced by the supervisor's attitude.	9.1	Demonstrate how a supervisor's attitude influences morale.
		9.2	Demonstrate the belief that employee morale is influenced by the supervisor's attitudes.
10.	Positive motivation and its close connection with communications.	10.1	Show an awareness of proper communication between parties in a business situation.
		10.2	Indicate awareness of the relationship between communication and employee motivation.

Mathematics - Level 1

1.	A knowledge of mathematics manipulations up to and including first degree algebraic expressions.	1.1	Develop accuracy and speed with basic and fundamental mathematical manipulation skills.
2.	Multiplying and extending figures with facility.	2.1	Demonstrate skill in finding the total amount that a quantity of an item costs.
		2.2	Multiply and extend figures with facility.
3.	Using and translating percentages with facility.	3.1	Show that percent indicates the comparison of ratio of any number to 100 and translate to percent.
		3.2	Use and translate percentages to fractions and decimals.
4.	Determining the price of merchandise being purchased from the original price.	4.1	Finding the unit price from a group price and the cost of a larger unit when a group or smalller unit is given.
		4.2	Compute for single item purchases and multiple item purchases.

Mathematics - Level 2

1. How to balance the cash receipts against the register readings.

1.1 Count the money in the register, take the register reading, and determine whether the receipts are even, over, or short.

1.2 Take a reading on a cash register and by deducting voids, overrings and refunds, determine the exact amount the register is short or over.

2. How to determine a cash register error, the amount and how to correct it on the proper form.

2.1 Identify a register error and make the correction on the proper form.

2.2 Demonstrate proper procedures for recorgnizing and correcting cash register errors that involve overrings and wrong departmental rings.

3. The knowledge that adequate stock turnover is closely related to operating profits.

3.1 Show how a rate of stock turn, and the number of times the average stock is sold during the year, is related to profits.

3.2 Describe courses of action, evaluate each, and state which would best solve the problem of adequate turnover as realted to operating profits.

4. How to figure turnover and interpret its relationship to department or store operating policies.

4.1 Compute stock turnover by correctly using a given formula or equation.

4.2 Describe the procedures for calculating an average inventory and show its relationship to store operating profits.

Mathematics - Level 2

5. Skill in making change using the cash register.

5.1 Make change from a purchase using the least number of coins possible.

5.2 Solve problems on change using the accepted method set forth by IDECC.

5.3 Make change quickly and accurately.

5.4 On a cash register, ring up items several times and arrive at the same total each time.

5.5 Calculate the total sale to the customer by completing the sales check accurately.

5.6 Complete a blank sales check and information regarding the sale, and total the purchase with no errors in computation.

Mathematics - Level 3

1. Skill in accurately computing employee discounts, delivery charges, alteration charges and layaway charges.	1.1 Figure employee discounts, and other charges such as delivery, alterations, layaway, etc. as found in the retail trade.
	1.2 Compute employee discounts, delivery charges, and alteration charges.
2. Knowledge of how to adjust pricing errors on merchandise price tickets and how to record such errors in markdown or markup records.	2.1 Change the price of the merchandise by taking a markdown or a markup and placing this price change on the proper form.
	2.2 List methods of adjusting pricing errors on merchandise tickets; record such errors in markup and markdown records.
3. Knowledge that a retail business firm's operating expenses include such expenses as payroll, buying expenses, promotional expenses, utilities, transportation, supplies, and delivery.	3.1 Compute the expenses of a retail firm and change the percentage of each into dollar figures.
	3.2 Discuss a business firm's operating expenses including such expenses as payroll, buying expenses, promotional expenses, utilities, transportation, and supplies and delivery.

		3.3	Calculate the amount of money that will be spent on these expenses, given the sales volume of the year and the percentage of sales to be spent on each expense.
4.	Skill in keeping stock control books - posting prices, styles, codes, sales, markdowns and merchandise returns.	4.1	Recognize that stock control consists of systematic plan for recording and reporting types and quantities of goods on hand and on order.
		4.2	Keep accurate stock control books, post prices, styles, codes, sales markdowns and merchandise returns.
		4.3	Demonstrate the importance of stock control in the retail business.
		4.4	Maintain correct stock control records.
5.	Knowledge of shipping terms as F.O.B. and C.O.D.	5.1	Define terms such as F.O.B. and C.O.D. as seen on many invoices.
		5.2	Define shipping terms.
6.	How to determine the dollar figures for various factors in the retail and/or cost method of inventory.	6.1	Show how important inventory is in figuring profit and loss for the business.
		6.2	Correctly compute problems using retail and cost methods of inventory.

7. How to determine the most beneficial discounts and dating to be used in pricing merchandise.	7.1	Recognize that the dating offered may determine from what vendor to buy.
	7.2	Compute discount date, the due date, the amount of payment and determine the most beneficial discount and dating.
8. How to read and interpret a profit and loss statement.	8.1	Identify the progress of a business during a certain period of time by reading the income statement (Profit & Loss).
	8.2	Demonstrate a knowledge and understanding of a profit and loss statement.
9. Chart and graph analysis; interpret the data	9.1	Show how to read charts and graphs used often in retailing.
	9.2	Analyze statements and problem situations.
10. Determining break-even points by departments.	10.1	Define break-even point, and solve the problems in determining break-even points by departments.
11. Figuring "open-to-buy" in an effert to determine a department or store's overbought condition or money available for additional merchandise purchase within a planned period.	11.1	Use the formula OTB = planned sales + planned EOM stock + planned markdowns minus BOM stock....to figure any over-bought condition for the given period of time.
	11.2	Determine a department or store's over-bought condition or money available for additional merchandise purchases within a planned period.
12. The ability to set up merchandise buying plans.	12.1	Recognize that each buyer prepares a six-month plan for the department.
	12.2	Select items that show that the merchandise buying plan serves as a guide to a profitable operation.

Merchandising - Level 3

1. The importance of planning for buying merchandise.	1.1	Demonstrate the ability to make decisions on styles, quantities, color, size, and delivery dates.
	1.2	Respond to a series of questions concerning the planning for buying the line of merchandise.
2. Buying for resale.	2.1	Demonstrate a knowledge of available resources and characteristics of individual manufacturing firms.
	2.2	List resource information sources and key factors to consider when selecting sources of supply.
	2.3	Demonstrate how to obtain the desired quality for the lowest price available by accepting and reviewing bids before orders are placed.
	2.3	Write factors to consider in reviewing and accepting competitive bids for merchandise, and identify major types of buying.

Merchandising - Stock Considerations - Level 3

1. The necessity for having a complete assortment of merchandise to stimulate sales.	1.1 Demonstrate the importance of the proper stocking of merchandise. 1.2 Explain why complete assortments of merchandise must be maintained at all times to stimulate the best sales.

Merchandising - Stock Considerations - Level 2

1. Promotion as a factor in marketing.	1.1	Develop an awareness of the importance of a promotional plan.
	1.2	Describe promotional ideas for the given product.
	1.3	Construct a promotional plan.
2. Develop the proper knowledge of buying merchandise.	2.1	Demonstrate an awareness of the importance of identifying the proper elements of buying merchandise.
	2.2	Identify and define the elements needed to determine the quantity of merchandise to buy when purchasing new merchandise or reordering basic stocks.
	2.3	Demonstrate skill in making quality and style comparisons when buying merchandise for a particular classification.
	2.4	Make quality and style comparisons for a product line.

Operations and Management - Level 1

1.	Special customer services.	1.1	Demonstrate the attitude that special customer services and accomodations build good will and increase sales.
		1.2	List special accomodations for customer services.
		1.3	Analyze each customer service regarding building good will and increasing sales.
		1.4	Differentiate between profitable and nonprofitable customer services.
2.	The importance of good record keeping.	2.1	Demonstrate a knowledge of proper record handling for effective store operation.

Operations and Management - Level 2

1. The importance of following lines of authority.

1.1 Demonstrate "chain of command" or lines of authority in a company.

1.2 Identify supervisory and managerial positions in lines of authority.

1.3 Explain if proper chain of command has been followed and why it is important.

Advertising - Level 1

1. The definition of advertising and its role in the
   - 1.1 Define advertising.
   - 1.2 Discuss advertising's role in bringing buyer and seller together.
   - 1.3 Explain the purpose of advertising and give example of each type.
   - 1.4 List examples of advertising media.
   - 1.5 List examples of promotional and institutional advertising.
2. The value of the parts of an ad and how to prepare an advertisement.
   - 2.1 Demonstrate the ability to lay out an advertisement.
   - 2.2 Develop a layout for a retail store advertisement and use the essential parts of an advertisement.

Advertising - Level 2

1. Various media and promotional techniques available to inform customers of sales events.	1.1 Identify the types of media that are available for advertising.
	1.2 List advertising media and promotional techniques that can be used to inform customers of a special event.
	1.3 Select for a firm with a target market the most appropriate advertising medium.

Advertising - Level 3

1. How to plan advertising strategies which will benefit all store departments or merchandise categories in a timely sequence.

1.1 Demonstrate the ability to identify the various seasonal needs and adequacy of merchandise supply of each of the merchandise categories.

1.2 Identify the major factors to consider in selecting merchandise for advertising that is seasonal and timely.

1.3 Explain why the suuply of advertised merchandise must be adequate before the advertisement is published.

1.4 Develop a plan according to the established criteria informing the sales personnel of a promotional activity.

Display - Level 1

1.	Identify the principles and elements of design used in display.	1.1	Identify the basic spatial arrangements used in display.
		1.2	Demonstrate skills in using the basic spatial design arrangements used in display.
2.	A knowledge of color used in display.	2.1	Identify skills needed to use the color wheel for primary and secondary colors.
		2.2	Sketch and construct one display that will exemplify the use of color harmony, balance and proportion,
3.	The effect of artificial light on colors used in display.	3.1	Recognize how direct and non-direct lighting affects colors.
		3.2	Explain how the use of color in display affects customer's acceptance of merchandise.
		3.3	List purposes of display lighting.

Display - Level 2

1.	Planning for scheduled displays and themes in advance.	1.1	Develop themes and display schedules for sales promotions.
		1.2	Write seasonal display themes for a retail store.
2.	Identifying displays that feature merchandise.	2.1	Demonstrate a knowledge of display identification.
		2.2	Select display illustrations that feature how the merchandise displayed can be used.
3.	Use of various types of display fixtures supporting display merchandise.	3.1	Identify articles and props used in display.
		3.2	Match the merchandise to the props that will best display it.
4.	The importance of show cards used in display.	4.1	Demonstrate skill in developing show card messages for displays.
		4.2	List purposes of the show cards used in displays.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

Prevocational

Content Standards

WILLIAM B. KEENE, State Superintendent

THE DELAWARE DEPARTMENT OF PUBLIC INSTRUCTION

CONTENT STANDARDS
FOR
99.0200 PREVOCATIONAL EDUCATION

99.0200 **Prevocational Education** -- a course or series of courses that provide orientation to a number of different occupational areas and counseling designed to prepare a student for entry into a vocational program in a comprehensive high school or a vocational-technical high school or shared-time facility.

PROGRAM OBJECTIVE		STANDARD OF STUDENT EXPECTATION
The program will provide instruction in:		The student will be expected to:
1. Attitude development and self awareness.	1.1	Understand and explain the expectations of employers with regard to worker contributions, i.e. knowledge, attitudes, skills and habits as they equate to compensation.
	1.2	Define what is meant by "attitude" and how it effects the perception of the individuals by others.
	1.3	Describe positive thoughts and positive feelings and explain how to reinforce them.
	1.4	List stereotypical phrases referring to males/females and their "roles" in the work place.
	1.5	Demonstrate good personal hygiene and grooming.
	1.6	List positive methods in dealing with others.

	1.7	Define stress and methods to deal with and/or eliminate stressful situations.
	1.8	Describe how one's self-concept affects what one will achieve in the work place. a. List interests, positive attributes about oneself. Positive feelings one has, and things one does well. b. Identify his/her individual knowledge, attitudes, skills and habits that employers would find desirable. c. Identify items of importance to the individual (i.e. family, careers).
2. Occupational Awareness.	2.1	Select three occupations of interest and research the skill and educational requirements of each.
	2.2	Identify resources for information regarding employment outlook and occupations.
3. Occupational orientation and exploration.	3.1	List five vocational education program areas.
	3.2	Identify occupation(s) relating to each program area.

	3.3	Identify and describe four (4) available vocational courses offered at area vocational school facilities and three (3) vocational courses offered within the comprehensive high school.
	3.4	List the State Board of Education approved vocational student organizations and explain their general goals and purposes.
4. Basic skills.	4.1	Identify math, science, and communication skills as they relate to vocational program areas and eventual employment.
5. Economic awareness.	5.1	Describe the free enterprise system and the opportunities and role of the individual in its success.
	5.2	Give an explanation of productivity and how it relates to the free enterprise system.
	5.3	Explain how productivity and progress in education decreases when students are absent from school. Relate this concept to the American economy and the free enterprise system.
6. Occupational planning and decision making.	6.1	Complete an individual interest survey.
	6.2	Develop a personal profile based on outcome of interest survey.
	6.3	Match interests, abilities and values for the preferred occupation at the present time.

6.4 Match the subjects and courses in the school curriculum that relate to occupational choices.

6.5 Clarify values by analyzing personal characteristics and preferences.

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Cooperative Diversified Occupations

Content Standards

WILLIAM B. KEENE, State Superintendent

THE DELAWARE DEPARTMENT OF PUBLIC INSTRUCTION

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CONTENT STANDARDS
FOR
DIVERSIFIED OCCUPATIONS
99.0900 Cooperative Diversified Occupations
Orientation Unit I

Program Objective	Standard of Student Expectation
1. The purposes for Cooperative vocational education.	1.1 Define the meaning of Cooperative vocational education: "Program of vocational education for persons who, through a cooperative arrangement between the school and employer, receive instruction, including required academic courses, and related vocational instruction by alternating study in school with ajob in any occupational field. These two experiences must be planned and supervised by the school and employers so that each contributes to the student's education and to his/her employability. Work periods and school attendance may be on alternate half-days, full-days, weeks, or other periods of time in fulfilling the cooperative vocational programs." 1.2 Identify the purposes of Cooperative Vocational Education. a. To serve as a transition from school to work. b. To provide job training at entry level. c. To develop enthusiasm for world of work. d. To provide an alternative to established educational programs.

The purpose of cooperative vocational education cont'd.

e. To integrate education and employment.

f. To supplement academic learning.

g. To utilize expertise in business and idustry.

h. To help with the needs of business and industry.

2. The procedures for Cooperative vocational education.

2.1 Comply with state guidelines:

a. Age.

b. Wages.

c. Hours.

d. Hazardous occupations.

2.2 Comply with local school policy:

a. Credits.

b. Sign out procedure.

c. Evaluation criteria.

d. Conduct.

e. Course requirements.

f. Attendance.

The procedures for cooperative vocational education cont'd.	2.3 Comply with specific classroom procedures as related to the individual: a. Course objectives. b. Attendance. c. Attitude. d. Deadlines. e. Projects.
	2.4 Recognize and use employment related forms: a. Training agreement. b. Training plan. c. Working permits. d. Personal data sheet. e. Student training station reports. f. Employer's rating sheet. g. Student identification card. h. Employment related tests.
3. An insight to Cooperative vocation education in Delaware.	3.1 Describe the development of Vocational a. History.

An insight to Cooperative vocational education in Delaware cont'd.

b. Growth.

c. Legislation.

d. Success.

e. Future.

3.2 Distinguish between the various youth groups available:

a. Agriculture - FFA.

b. Business Education - OEA.

c. Distributive Education - DECA.

d. Home Economics - FHA/HERO.

e. Health - HOSA.

f. Health, Trades and Industry - VICA.

g. Industrial Arts Education - AIASA.

3.3 Analyze the occupational needs of the community:

a. Job availability.

b. Rate of unemployment.

c. Teen-age employment.

d. Skilled.

An insight to Cooperative vocational education in Delaware cont'd.

e. Unskilled.

3.4 Evaluate the benefits of Cooperative Vocational education to the following groups:

a. Business.

b. Community.

c. School.

d. Student.

e. Labor.

3.5 Differentiate between the seven areas of Vocational education.

a. Agriculture.

b. Business and Office.

c. Distributive Education.

d. Health Occupations.

e. Home Economics.

f. Trade and Industry.

g. Diversified Occupations.

h. Industrial Arts.

An insight to Cooperative vocational education in Delaware cont'd.

3.6 Define Cooperative vocational education terms:

a. Advisory committee.

b. Career Objectives.

c. Child labor laws.

d. Cooperative education.

e. Coordination.

f. Employer rating sheet.

g. Entry level employment.

h. Hazardous occupations.

i. Job.

j. Occupation.

k. On the job training.

l. Pay check deductions.

m. Rate of pay.

n. Related training.

o. Social security card.

p. Student learner.

An insight to Cooperative vocational education in Delaware cont'd.

q. Training agreement.

r. Training pain.

s. Training station.

t. Working papers.

u. Workman's compensation.

v. W-2 forms.

Career Development, Unit II

1. The meaning of work, its past, present, and future.

1.1 Explain the nature and meaning of work:

   a. Definition of work.

   b. Individual outlooks and attitudes toward work.

   c. Definition of the term occupation.

   d. Why people pursue various types of work activities.

1.2 Recognize and discuss the historical perspective of work:

   a. In the beginning of civilization, people worked only for survival.

   b. Transition from agricultural to an idustrial society.

   c. Scientific and technological advances.

   d. Availability of career choices.

   e. Changes in the family.

   f. The working woman.

   g. Transportation.

   h. Mass production.

	The meaning of work, its past, present, and future con'd.		i. The changing society. j. Cycle of working years.
		1.3	Analyze and appraise future developments in job trends: a. Shorter work week. b. Vacation, holidays. c. Earlier retirement. d. Job specialization. e. Higher salaries. f. Equal rights. g. Scientific and technological advances.
2.	Knowledge of why people work and personal satisfaction gained.	2.1	Analyze the reasons why people work: a. Economical. b. Sociological. c. Psychological. d. Physiological.

Knowledge of why people work and personal satisfaction gained cont'd.

2.2 Identify why people find satisfaction in their work while others do not:

a. Human relations.

b. Opportunity for advancement.

c. Good working conditions.

d. Job security.

e. Pay.

f. Job alienation (work does not fit self-concept).

g. Data-people-things, as related to the individual's job.

3. Better understanding of self for career planning.

3.1 Summarize individual personality traits affecting career development.

3.2 Analyze and determine individual interests.

3.3 Recognize and evaluate aptitudes and abilities.

3.4 Formulate individual values and beliefs:

a. Family.

b. Conscience.

4. The facts of career development.

4.1 Classify occupations:

   a. Socioeconomic.

   b. Census.

   c. Prestige.

   d. Dictionary of Occupation Titles.

   e. Career clusters.

4.2 Recognize the need for career exploration.

   a. Values, needs, interest, aptitudes, and abilities.

   b. Level of education needed.

4.3 List methods of career exploration.

4.4 Locate and use types of services related to occupations.

5. The process and importance of good career planning.

5.1 List reasons for planning ahead.

5.2 Analyze factors and forces that influence career choices.

5.3 Recognize the importance of relevant education.

ACQUIRING A JOB, UNIT II

1. Techniques for locating job opportunities and methods for contacting and approaching potential employers.

1.1 Identify sources where job prospects can be located.

a. D.O.I.C.C.

1.2 Analyze job prospects according to:

a. Career objective.

b. Interest.

c. Aptitude.

d. Abilities.

e. Salary.

f. Fringe benefits.

g. Working conditions.

h. Geographic location.

i. Hours of work.

1.3 Utilize the sources available to determine job vacancies (Refer to 1.1).

	1.4	Use the proper approach in contacting potential employers through the following methods: a. Telephone. b. Letter. c. Personal contact.
2. How to apply for a job using the personal data sheet, application form, and letter of application.	2.1	Develop personal data sheet and use it properly when applyin for a job (resume).
	2.2	Explain the use of the application form by the employer.
	2.3	Complete various types of application forms with accuracy and legibility.
	2.4	Explain when and how to use a letter of application.
3. General qualities that employers desire in job applicants.	3.1	Analyze strengths and weaknesses with the qualities desired in job applicants by employers.
4. Attitude, traits and skills that assist in making a favorable impression on employers during the job interview.	4.1	Identify and practice for a job interview.
	4.2	Identify types of interview situations that may be encountered.
	4.3	Answer typical questions that may be asked by employers during job interviews.

	4.4	Use proper conduct during an actual interview session demonstration.
	4.5	Evaluate interview performance by self-rating according to a prepared checklist.
	4.6	Explain the importance of an interview and follow-up.
5. Job offiers in line with individual needs.	5.1	Identify rational selection process in the evaluation of job offers.

ELEMENTS OF JOB SUCCESS, UNIT IV

1. Personality assessment and its importance to occupational success.	1.1	Define personality development as it relates to job performance.
	1.2	Recognize the importance of personality development for job success.
	1.3	Identify aspects of personality development.
	1.4	Categorize personality traits necessary for job success.
	1.5	Complete personality self-appraisal.
2. A knowledge of how to work effectively with employers and co-workers.	2.1	List ways of adjusting to the work environment: a. Physical features. b. Procedures and policies. c. Training station information.
	2.2	Recognize the importance of co-worker relationship.
	2.3	Describe the importance of employer-employee relationship.

3. Knowledge of the training station, the specific job, and the inter-relationship of all jobs within the company.	3.1	List desirable personality traits necessary for a positive learning attitude.
	3.2	Identify job responsibilities.
	3.3	Identify the conditions of employment.
4. The importance of safety on the job.	4.1	Identify safety factors one must consider on the job.
	4.2	List rules of safety on the job.
	4.3	Correctly identify and use protective equipment and clothing.
	4.4	Demonstrate how to administer basic first aid.
	4.5	Identify the employer's obligation to conform to OSHA rules and regulations.
5. The methods for job advancement, for setting realistic goals, and for using techniques for terminating employment.	5.1	Develop goals for progress on the job.
	5.2	Describe relationship of job competency to successful job performance.
	5.3	Identify ways to advance on the job.
	5.4	Demonstrate a positive approach to get an increase in wages.
	5.5	Demonstrate a knowledge of the proper procedures to follow when terminating employment.

GOVERNMENT AND YOU, UNIT V

1. Local, state and federal payroll deductions and government service derived from direct and indirect taxes.
    - 1.1 Determine payroll deductions.
    - 1.2 Identify federal, state and local income tax with holdings.
    - 1.3 Analyze taxes not relating to payroll deductions, but having a direct effect on net spending power.
    - 1.4 List services provided by the government in return for tax dollars spent.
2. Use of tax forms required for tax computation.
    - 2.1 File and complete federal, state and local tax forms, using appropriate materials.
3. The purposes, growth, benefits, and basic operational functions of the Social Security and other retirement programs.
    - 3.1 Identify the factors leading to the development of Social Security legislation.
    - 3.2 Analyze the collection and maintenance functions of the Social Security system.
    - 3.3 List the benefits of Social Security.
    - 3.4 Complete a Social Security application.
    - 3.5 Demonstrate an awareness of retirement programs, other than Social Security.
4. Local, state and federal governmental regulations which will affect employment, personal safety, and job security.
    - 4.1 Describe government regulations that affect employment and place of employment.
    - 4.2 Describe the Workmen's compensation program.

YOU AS A CONSUMER, UNIT VI

1. Budgeting and the importance of keeping financial records.

1.1 Explain the importance of budgeting.

1.2 Identify personal and economic objectives.

1.3 Plan a persona budget with consideration of the following:

- a. Income.
- b. Fixed expenses.
- c. Flexible expenses.
- d. Savings.
- e. Day-to-day living expenses.

2. Using all banking procedures.

2.1 Explain the role and functions of banking in the free enterprise system.

2.2 Define the two bank classifications.

2.3 Explain the difference between a commercial bank and a saving and loan association.

2.4 Explain the reason for and the functions of the Federal Reserve System.

2.5 Define and demonstrate a working knowledge of and ability to use banking services.

3. Investments by students.	3.1	Define and list the various types of investments and the advantages and disadvantages of each.
	3.2	Locate information on the financial page of the newspaper.
	3.3	Chart a selected share of stock for a 5 day period.
4. Use of Credit.	4.1	Define the concept of credit.
	4.2	List and explain the six c's of credit: a. Character. b. Capacity. c. Capital. d. Conditions. e. Collateral. f. Common sense.
	4.3	Explain how to use credit wisely.
	4.4	Appraise the various credit plans according to cost, convenience, availability and products purchased.

5. Knowledge and the skill required for intelligent buying.

5.1 Identify and explain the factors that influence the selection of goods and services.

5.2 Analyze guides to intelligent buying.

5.3 Recognize the promotional devices that are used to influence purchasing ability.

5.4 Identify the retail outlets available.

5.5 Identify the factors affecting the choice of a retail outlet.

5.6 Describe the value in using various purchasing techniques.

5.7 Identify the laws, regulations and levels of government that affect the consumer.

5.8 Define the concept of contracts and major characteristics.

5.9 Identify the effects of breach of contract by seller and buyer.

5.10 Identify the major elements of installment sales contracts.

5.11 Identify the most common forms of fraud.

5.12 Identify the sources of assistance in dealing with consumer fraud.

6. Relating specific kinds of insurance to personal needs.	6.1	Explain the concept of insurance.
	6.2	Demonstrate a knowledge of the various types of insurance.
	6.3	List the factors to consider in purchasing insurance.
7. The operation of small claims court.	7.1	Demonstrate the ability to represent yourself in small claims court if he has a legal claim.

FREE ENTERPRISE SYSTEM, UNIT VII

1. The economic functions performed in the free enterprise system and the comparative characteristic of other economic growth.

1.1 Analyze the limited resources in relation to the individual's needs and wants.

1.2 Describe the major functions performed in each economic level.

1.3 Identify types of economic systems.

1.4 Describe the characteristics of the free enterprise system.

1.5 Outline the circular flow of how our economy operates.

1.6 Explain how government affects our free enterprise system.

1.7 Demonstrate an understanding of the rate of money in our economy.

1.8 Analyze and explain the economic functions in our economy.

1.9 Compare the characteristics of different economic systems.

2. Worker, supervisory, and managerial levels in a business organization structure.

2.1 Recognize the chain of command of a business organization and explain functions and responsibilities at each level.

2.2 Identify the trainee's entry-level position in relation to the organizational structure.

	2.3	Identify the opportunities for achievemnt and promotion.
3. Labor organizations and the importance of labor, management, and government in the operation of American business.	3.1	Identify the factors that brought about the formation of labor organization.
	3.2	Describe the history and growth of labor organizations.
	3.3	Describe structure and functions of union organizations.
	3.4	Identify economic pressures of a production slowdown caused by labor or management.
	3.5	Recognize and identify local, state and federal regulations affecting employment.

INDIVIDUAL DEVELOPMENT, UNIT VIII

1. The decision-making process and problem-solving techniques.	1.1	Identify a need:
		a. Student's evaluation of own decision-making and problem-solving processes.
		b. Identify and select alternative solutions.
2. The factors involved in developing "self-concept".	2.1	Analyze interests.
	2.2	Analyze aptitude.
	2.3	Develop and appraise individual abilities.
	2.4	Recognize personality traits, characteristics, and values.
	2.5	Recognize the influence of values.
	2.6	Formulate a set of life goals.
3. The importance of communication for individual development.	3.1	Obtain, receive, interpret, and follow oral and written instructions.
	3.2	Disseminate instructions effectively.
	3.3	Develop rapport with others.
	3.4	Demonstrate adequate methods of written communication.

4. The importance of leadership.	4.1 Identify leadership abilities.
	4.2 Improve their leadership abilities.
	4.3 Participate in student organizations.
5. The importance of continuing education for individual development.	5.1 List the types and locations of continuing education.
	5.2 Recognize reasons why people pursue continuing education.

USE OF LEISURE TIME, UNIT IX

1.	Various leisure time and recreational activities.	1.1	Recognize the need for personal improvement through leisure time activities.
2.	Factors influencing their personal choices in leisure time activities.	2.1	Describe the factors that influence or limit the selection and participation in leisure time activities.
		2.2	Identify the leisure time activities available in the community.
		2.3	Plan leisure time activities.

Trade and Industrial Content Standards

WILLIAM B. KEENE, State Superintendent

THE DELAWARE DEPARTMENT OF PUBLIC INSTRUCTION

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CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
10.0104 Radio and Television Production and Broadcasting Technology

10.0104 Radio and Television Production and Broadcasting Technology -- an instructional program that prepares individuals in the production of materials, production and broadcasting of materials or programs. Includes instruction in the equipment, processes, and procedures used in producing and making radio or television broadcasts; various componenets, specialized equipment, and systems of devices employed in broadcast operations; electronic communication, both radio and television; script and program preparation; photographic and audiorecording of material to be broadcast; monitoring, modulating, and controlling the broadcast processes; and recording and storing broadcast materials.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguish use in case of fire; recognize the uses of the safety color code, and complete a shop safety inspection.
	1.1 Match the terms associated with shop safety to the correct definitions.
	1.2 Match the colors of the safety color code to the correct applications.
	1.3 list personal safety rules.
	1.4 List general shop safety rules.
	1.5 Match possible sources of accidents to the injury which may occur.
	1.6 Demonstrate or identify the proper procedure should an accident occur.

	1.7	Complete a shop inspection identifying unsafe situations and equipment.
2. TV studio equipment.	2.	Operate television studio equipment.
	2.1	Operate a TV camera.
	2.2	Assemble and operate a basic TV camera support system.
	2.3	Set up and operate a studio lighting system.
	2.4	Light a multi-set program.
	2.5	Design and execute a TV floor plan with set pieces and decorations.
3. Control room equipment.	3.	Operate control room equipment.
	3.1	Operate a television production switcher/special effects generator.
	3.2	Operate a character generator.
	3.3	Connect and operate an audio system.
	3.4	Connect and operate a video recording system.
	3.5	Operate the film chain island.
	3.6	Connect cables, operate video recorders, and duplicate video tapes.
	3.7	Edit video tapes.

	3.8	Catalog, handle, and distribute video tapes.
4. TV production.	4.	Complete a TV production.
	4.1	Develop and write script for production.
	4.2	Demonstrate an understanding of the key consideration in designing visual materials used in television production.
	4.3	Produce and direct a basic TV program.
	4.4	Post produce the final TV program.
5. Portable camera systems.	5.	Operate a portable camera system.
	5.1	Set up and operate a portable television camera.
	5.2	Connect and operate a portable video recording operation.
	5.3	Set up and operate a portable lighting system.
	5.4	Connect and operate a remote audio system.
6. Student organizations.	6.	Participate in student organization activities.
	6.1	Identify leadership qualities.
	6.2	Demonstrate a positive attitude toward work.
	6.3	Identify and perform a school or community service.

6.4 Identify the four main offiers of a club and explain their role.

6.5 Demonstrate skill in interviews by a prospective employer, club adviser, or other individual for a job.

6.6 Identify and carry out at least four (4) parliamentary problems.

6.7 Participate in at least two (2) activities.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.	5.1 Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality. c. Honesty. d. Cooperation. e. Cleanliness of self and work place. f. Productivity. g. Communication. h. Completion of tasks. i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
15.0302 Electrical Technology

15.0302 Electrical Technology -- an instructional program that prepares individuals to support an electrical engineer in the design, development, and testing of electrical circuits, devices, and systems, for generating electricity and distributing electrical power. Includes instruction in model and prototype development and testing; systems analysis and integration, including design, development of corrective and preventive maintenance techniques; application of engineering data; and the preparation of reports and test results.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code, and complete a shop safety inspection.
	1.1 Accurately match terms associated with shop safety to the correct definitions.
	1.2 Accurately match the colors of the safety color code to the correct applications.
	1.3 List personal safety rules.
	1.4 List general shop safety rules.
	1.5 Match possible sources of accidents to the injury which may occur.
	1.6 Demonstrate or identify the proper procedures should an accident occur.
	1.7 Complete a shop inspection identifying unsafe situations and equipment.

2. Selection and maintenance of tools.	2. Identify and select the proper tools for the job and maintain them in a safe condition.
	2.1 Identify hand tools and their purposes.
	2.2 Identify power tools and explain their operation.
	2.3 Select the proper tool for the job, demonstrate the proper use, and identify safety precautions.
	2.4 Explain and demonstrate how to properly maintain tools.
3. Electricity technology.	3. Demonstrate knowledge of electricity technology.
	3.1 Apply principles of electricity.
	3.2 Interpret electrical circuit diagrams.
	3.3 Apply National Electrical codes.
4. Electrical wiring systems.	4. Design electrical wiring systems.
	4.1 Calculate number and types of circuits to be used.
	4.2 Calculate lighting requirements.
	4.3 Use contractor's directions, National Electrical codes, and local ordinances for design.

5. Electrical hardware.	5. Install electrical hardware. 5.1 Install the following: a. Ground circuit breaker and meter panel. b. Electrical conduit. c. Non-metallic sheathed cable. d. Concealed wiring before floors, walls and ceilings are installed. e. Switch and receptacle outlets. f. Lighting outlets. g. Conduits and conductors. h. High-voltage receptacle. 5.2 Connect power cable to equipment and install grounding leads. 5.3 Assure access to installations for future maintenance.
6. Testing installed circuitry.	6. Test installed circuitry. 6.1 Perform the following: a. Test lamp to check circuit continuity.

b. Check action of switches using test lamp.

c. Test for short circuits.

d. Test for proper ground.

e. Examine wiring for burns, cracks, or abrasions.

f. Manipulate wires to check insulation brittleness.

g. Inspect bare wires for corrosion.

h. Inspect wiring straps and attachments.

i. Inspect wiring for overload using inductive ammeter.

j. Repair non-operative or malfunctioning circuits.

7. Electrical controls.

7. Inspect and maintain electrical controls.

7.1 Check, repair, or replace power capacitors.

7.2 Inspect and repair solenoids.

7.3 Inspect, service, and replace contact points.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.	5.1 Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality. c. Honesty. d. Cooperation. e. Cleanliness of self and work place. f. Productivity. g. Communication. h. Completion of tasks. i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
15.0303 Electronic Technology

15.0303 Electronic Technology -- an instructional program that prepares individuals to support the electronic engineer and other professionals in the design, development, modification, and testing of electronic circuits, devices, and systems. Includes instruction in practical circuit feasibility; prototype development and testing; systems analysis, including design, selection, installation, calibration, and testing; solid-state and microminiature circuits; and the application of engineering data to specific problems in the electronics field.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code, and complete a shop safety inspection.
	1.1 Accurately match terms associated with shop safety to the correct definitions.
	1.2 Accurately match the colors of the safety color code to the correct applications.
	1.3 List personal safety rules.
	1.4 List general shop safety rules.
	1.5. Match possible sources of accidents to the injury that may occur.
	1.6 Demonstrate or identify the proper procedure should an accident occur.
	1.7 Complete a shop inspection indentifying unsafe situations and equipment.

2. Selection and maintenance of tools.	2. Identify and select the proper tools and test equipment for the job and maintain them in a safe condition. 2.1 Identify hand tools and their purpose. 2.2 Identify power tools and explain their operation. 2.3 Select the proper tool for a job, demonstrate the proper use, and identify safety precautions. 2.4 Identify electronic test equipment and their purposes. 2.5 Select the proper test equipment for a job, demonstrate the proper use, and identify safety precautions.
3. Soldering.	3. Identify and solder joint, solder and desolder utilizing correct procedures and tools, and properly maintain soldering equipment. 3.1 Describe and identify characteristics of a proper solder joint. 3.2 Demonstrate proper care for soldering equipment. 3.3 Demonstrate proper stripping and tinning of stranted wire.

3.4 Demonstrate proper printed circuit board soldering.

3.5 Demonstrate basic desoldering techniques.

4. D.C. Circuit analysis.

4. Demonstrate skill and knowledge in D.C. circuit analysis.

4.1 Define and identify insulators and conductors.

4.2 Define and identify the Law of Charges.

4.3 Demonstrate a knowledge of voltage polarity.

4.4 List five sources of electricity.

4.5 Identify resistor values using the color code.

4.6 Match components with their symbols.

4.7 Define and measure voltage.

4.8 Define and measure current.

4.9 Define and measure resistance in Ohms.

4.10 Solve for E, I, and R using Ohm's Law.

4.11 Construct a series resistive circuit.

4.12 Construct a parallel resistive circuit.

D.C. circuit analysis cont'd.	4.13 Construct a series-parallel resistive circuit. 4.14 Calculate and measure voltage and currents in a series resistive circuit. 4.15 Calculate and measure voltages and currents in a parallel resistive circuit. 4.16 Calculate and measure voltages and currents in a series-parallel resistive circuit. 4.17 Identify different types of resistors and measure for accuracy. 4.18 Given the necessary values, design and construct a loaded voltage divider circuit.
5. A.C. circuit analysis.	5. Demonstrate skill and knowledge in A.C. circuit analysis. 5.1 Diagram and label a Sinesoidual wave form. 5.2 Calculate Peak to Peak, RMS, and Average Values of AC voltage. 5.3 Measure amplitude and frequency. 5.4 Identify types of inductors. 5.5 Describe the characteristics of inductors. 5.6 Calculate transformer turns ratio.

A.C. circuit analysis cont'd.

5.7 Calculate inductance in series and parallel.

5.8 Calculate True and Apparent power.

5.9 Calculate power factor.

5.10 Calculate inductive reactance.

5.11 Identify types of capacitors.

5.12 Describe effects of AC and DC in a capacitor.

5.13 Calculate time constant of an RC circuit.

5.14 Calculate capacitance in series and parallel.

5.15 Calculate capacitive reactance.

5.16 Describe the effects of low and high pass filters.

5.17 Describe characteristics of series and parallel resonant circuits.

6. Electronic circuit analysis.

6. Demonstrate skill and knowledge in electronic circuit analysis.

6.1 Define, identify and draw schematic symbols for semi-conductor components.

6.2 Describe and demonstrate a forward and reverse bias PH junction.

Electronic circuit analysis cont'd.

6.3 Describe, construct, and measure output of a half wave power supply.

6.4 Describe, construct, and measure output of a full wave power supply utilizing two diodes and center tapped transformer.

6.5 Describe and construct a bridge rectifier circuit.

6.6 Identify and describe the effect of different types of power supply filters.

6.7 Describe the proper operation of a voltage regulator.

6.8 Define Beta.

6.9 Identify the three different types of transistor configurations and describe their characteristics.

7. Digital electronics.

7. Demonstrate ksill and knowledge of digital electronics.

7.1 Compare digital and analogue waveforms.

7.2 Convert between the binary, octal, decimal and hexadecimal numbering system.

7.3 Draw the logic symbols, write the boolean expressions, and write the truth tables for the basic logic gates.

Digital electronics cont'd.

7.4 Given a simple logic diagram, construct the circuit utilizing IC chips.

7.5 Describe the purpose of Karnaugh mapping.

7.6 Identify several basic codes used in industry.

7.7 Describe the purpose of encoders and decoders.

7.8 Describe basic flip flops, registers, and counters.

7.9 Define basic digital memories.

8. Basic computer systems.

8. List facts about a basic computer system; connect and disconnect various peripherals; describe differences between languages, and disassemble a small computer to its basic parts.

8.1 Draw a block diagram of a basic computer system.

8.2 Describe different types of Input and Output devices.

8.3 Describe different types of mass storage devices.

8.4 Connect and disconnect various Input and Output devices, such as disk drives and printers, to a computer system.

	8.5 Identify and describe different types of data transfers used in computers.
	8.6 Describe differences between machine language and high level languages.
	8.7 Disassemble and reassemble a small computer in order to troubleshoot the CPU.
9. Basic troubleshooting techniques.	9. Demonstrate a knowledge of basic troubleshooting techniques.
	9.1 Demonstrate a systematic and logical method of troubleshooting utilizing a block diagram.
	9.2 Given a schematic of a DC resistive circuit, isolate the problem to the defective unit.
	9.3 Given schematics and manufacturer's specifications of a power supply, isolate the problem to the defective section.
	9.4 Given schematics and manufacturer's manuals of a small computer system, isolate the problem down to the basic unit.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.	5.1 Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality. c. Honesty. d. Cooperation. e. Cleanliness of self and work place. f. Productivity. g. Communication. h. Completion of tasks. i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in:
	a. Social and interpersonal skills.
	b. Oral and written communication.
	c. Organization and management skills.
	d. Civic responsibilities.
	e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
15.0601 Chemical Manufacturing Technology

15.0601 Chemical Manufacturing Technology -- an instructional program that prepares individuals to support chemists in the chemical manufacturing field. Includes instruction in material handling, crushing, grinding and sizing; extraction, distillation, evaporation, drying, absorption, and heat transfer; and assisting in design, installation, and operation of pilot plants for chemical-manufacturing processes.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Laboratory safety.	1. Demonstrate or identify: a. The proper methods for handling and disposing of chemicals and common laboratory equipment. b. The personal safety requirements for working in a chemical laboratory environment. c. The proper use and types of fire extinguishers found in the chemical laboratory. d. The proper behavior expected while working in a chemical laboratory. e. The location of and proper operation of all general laboratory safety equipment. f. The proper procedures to be followed should an accident occur.

2. Branches of the chemical industry.	2. Identify the general branches and characteristics of each branch of the chemical industry. 2.1 Define and describe the distinguishing characteristics of each term: a. Chemistry. b. Organic chemistry. c. Inorganic chemistry. d. Analytical chemistry. e. Physical chemistry. f. Bichemistry. g. Polymer chemistry.
3. Laboratory procedures.	3. Perform basic chemical laboratory procedures. 3.1 Demonstrate the steps in operating and adjusting the flame temperature of a laboratory burner. 3.2 Demonstrate the proper use and operation of analytical, top loading and tripple beam balances. 3.3 Given a graduated cylinder, a volumetric pipet, and a buret, demonstrate the proper use of each.

Laboratory procedures cont'd.

3.4 Demonstrate the proper procedures for separating a solid from a liquid by both gravity filtration and vacuum filtration, using a Buchner funnel.

3.5 Demonstrate the proper procedure for transferring a solid to a weighing dish.

3.6 Demonstrate the proper procedure for transferring a liquid from a reagent bottle to an empty container.

3.7 Calculate the amount of reagent required and prepare solutions using concentration units of percent by weight, parts per million, molarity, molality and normality.

3.8 Demonstrate the proper procedures for washing and drying precipitates.

3.9 Prepare organic compounds, inorganic compounds and polymeric compounds.

3.10 Purify various substances by each of the following methods:

a. distillation

b. sublimation

c. recrystallization.

Laboratory procedures cont'd.

3.11 Identify various unknowns based on their chemical and physical properties.

3.12 Determine the quantity of a pure substance in a mixture using volumetric, gravimetric and instrumental methods of analysis.

4. Basic chemical laboratory measurements.

4. Perform basic chemistry laboratory measurements using the S.I. system of measurements; know and apply the rules for identifying significant digits, the rules for rounding off non-significant digits and scientific notation.

4.1 Measure length, mass, volume, temperature, pressure and time using the basic units of the S.I. system.

4.2 Given a S.I. prefix, convert it to any other prefix of the S.I. system.

4.3 List the basic S.I. units for the measurement of length, mass, volume, temperature, pressure, heat and time.

4.4 Given various numbers, identify the number of significant digits in the numbers.

4.5 Given various numbers, add, subtract, multiply and divide the numbers and report their results to the proper number of significant digits using rounding off of non-significant digit rules.

4.6 Given a number, express it in scientific notation and vice-versa.

5. Basic concepts of matter.

5. Describe basic concepts of matter.

5.1 Identify, define, and give examples of the three physical states of matter.

5.2 Given the names of common substances,

a. List their chemical names and vice-versa.

b. Classify them as either elements, compounds or mixtures.

5.3 Given the name of common elements, classify them either as metals, non-metals or metaloids.

5.4 Given the properties of common substances, classify them either as chemical properties or physical properties.

5.5 Given a change in common substances, classify it as either a chemical or a physical change.

5.6 Given a solid or liquid, determine its physical properties such as density, melting point, boiling point, specific heat and solubility.

	5.7 Given various reagent and procedures, determine if a chemical or physical change takes place.
6. Structure of atoms.	6. Describe the structure of an atom. 6.1 Define the three basic subatomic particles according to their properties. 6.2 Given the periodic chart of the elements, determine the number of protons, electrons, neutrons, the number of electron shells and valance shell electrons for the elements. 6.3 Given a period chart, diagram the atomic structure of an atom by writing the number of proton and neutrons in its nucleus and arranging the electrons in principal energy levels. 6.4 Given the periodic chart, draw dot diagrams for the elements.
7. Structure of organic and inorganic compounds.	7. Describe the structure of organic and inorganic compounds.

7.1 Given the periodic chart and the formula for a compound, predict correcting its bonding type in binary and ternary compounds.

7.2 Given the names of compounds, draw Lewis structures for the compounds.

8. Organic and inorganic chemical nomenclature.

8. Define organic and inorganic chemical nomenclature.

8.1 Write the formula for compounds consisting of:

a. Two non-metals.

b. Metals with fixed and variable oxidation numbers with a non-metal.

c. Metal ions having either fixed or variable oxidation numbers with polyatomic ions.

8.2 Write the formula for the following types of compounds:

a. Bases.

b. Acids.

c. Salts.

d. Organic compounds.

9. Calculations - elements and compounds.

9. Perform calculations involving elements and compounds.

9.1 Calculate the formula or molecular mass of various compounds.

9.2 Calculate:

a. The moles of elementary units in a substance.

b. The percent composition of an element in a compound.

c. The mass of any element in a substance or mixture.

d. The number of atoms or ions of each element present in a compound.

9.3 Given the volume of a gas at STP, its name or formula and a table of approximate atomic weights, calculate:

a. The numner of moles of gas present.

b. The mass of the gas present.

c. The number of molecules of the gas present.

9.4 Given the percent composition of a compound and a table of approximate atomic weights, calculate the empirical formula for the compounds.

10. Describing chemical changes.

10. Describe a chemical change through the use of balanced chemical equations.

10.1 Balance various types of chemical equations.

10.2 Complete and balance various chemical equations.

10.3 Balance the equations using either the oxidation number method or the ion-electron method.

11. Calculations using balanced chemical equations.

12. Calculations using gas laws.

11. Perform calculations using balanced chemical equations.

    11.1 Given the mass or the number of moles of a reactant or product, a balanced chemical equation and a table of approximate atomic masses, calculate the mass or number of moles of another reactant or product necessary to either produce another product or determine the mass of a reactant necessary to produce a given amount of product.

    11.2 Solve stoichiometry problems involving limiting reagents.

12. Perform calculations using the gas laws.

    12.1 Give the kinetic theory of gases.

    12.2 List the properties real of gases.

    12.3 Define Boyle's Law, Charles's Law, Gay-Lussac's Law, Dalton's Law of Partial Pressures, and the Universal Gas Law.

    12.4 Using the gas laws listed in 12-3, calculate the effects of changes in pressure, temperature and colume and the effect they have on each other.

    12.5 Using the General and Universal Gas Laws, calculate the molecular masses of various gases.

13. Types and properties of solutions.

13. Identify the various types and properties of solutions.

13.1 Define the following terms: solution, solute, solvent, saturated solution, unsaturated solution, super saturated solution and colloidal solution.

13.2 List the factors that determine the solubility of one substance in another.

13.3 List the factors that determine the rate at which a solute will dissolve in a solvent.

13.4 Given a graph of the solubility of a salt in a liquid at various temperatures, determine the solubility from the graph at any temperature, and vice versa.

13.5 List the types of colloidal solutions and their properties.

14. Chemical changes in solutions.

14. Evaluate a solution as to its acidity and pH and express chemical changes as ionic equations.

14.1 Define the following terms: Arrhenius Acid, Bronsted-Lowey Acid, titration, indicator, electroyte, pH, ionic equation, strong electroyte, weak electrolyte, galvanic cell, electrolytic cell and voltaric cell.

14.2 Given the results of a titration, calculate the concentration of an unknown.

14.3 Given the hydrogen ion concentration of a solution and a table of logarithms, calculate the pH and poH of a solution and vice versa.

14.4 Given the formulas of reactants and their status, complete and balance equations expressing them as total and net ionic equations.

15. Organic compounds.

15. Describe the various classes or organic compounds, functional groups and polymers.

15.1 State the names and give structural formulas of the common alkanes.

15.2 Define organic chemistry, hydrocarbons, alkanes, alkenes, alkynes, aromatics, and functional group.

15.3 Given the general molecular formula for open-chain or aromatic hydrocarbons, write their condensed structural formula.

15.4 Given the structural formula for hydrocarbons, write IUPAC names for each.

15.5 Given the IUPAC names of hydrocarbons, write their structural formula.

15.6 Complete and balance simple chemical equation for the reaction of hydrocarbons with chlorine, bromine and oxygen.

15.7 Write IUPAC names, radio-functional names and common names where appropriate for: alcohols, halides, phenols, ethers, aldehydes, ketones, carboxylic acids, esters, amides, amines and vice versa.

15.8 Given a specific carboxylic acid, complete and balance the equations for the reaction of this acid with basic compounds.

15.9 Given a specific ester, complete and balance the equations for its reaction with aqueous acid or base.

15.10 Prepare a polyamide, a polyvinyl acetate and a polyester.

15.11 Given the basic structure of a polymer, name the polymer and vice versa.

16. Nuclear energy.

16. Describe nuclear energy.

16.1 List the modern and traditional symbols and propeties for the following particles or rays: alpha, beta gamma, position, neutron, proton, and deutron.

16.2 Define the following terms: neuclear reactions, radioactivity, currie, chain reaction, critical mass, half-life, nuclear fusion, nudear fusion.

15.9 Given a specific ester, complete and balance the equations for its reaction with aqueous acid or base.

15.10 Prepare a polyamide, a polyvinyl acetate and a polyester.

15.11 Given the basic structure of a polymer, name the polymer and vice versa.

16. Nuclear energy.

16. Demonstrate a basic understanding of nuclear energy.

16.1 List the modern and traditional symbols and propeties for the following particles or rays: alpha, beta gamma, position, neutron, proton, and deutron.

16.2 Define the following terms: neuclear reactions, radioactivity, currie, chain reaction, critical mass, half-life, nuclear fusion, nudear fusion.

16.3 Given a particular radioactive isotope, its method of decay and the periodic table, write a balanced equation for the nuclear reaction.

16.4 Given a particular radioactive isotope, its half-life and mass before decay, and time of decay or the amound remaining at a particular time, calculate either the amount remaining at a particular time or the time necessary to obtain a given mass.

16.5 Explain the effects various particles and rays have on the human body.

16.6 Diagram and explain how a nuclear electrical power plant operates.

16.7 List five peaceful uses of radioactivity.

16.8 List the environmental problems associated with nuclear energy.

17. Instrumental analysis.

17. Perform instrumental analysis.

17.1 Obtain visible, UV, infrared, and atomic absorption spectral analysis using the appropriate spectrophotometer and interpret the results.

17.2 Operate a gas chromatograph and interpret the results.

17.3 Operate a pH meter and interpret the results.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to:
	a. Wages, salaries and benefits.
	b. Skills needed on the job.
	c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in:
	a. Finding a job.
	b. Applying and interviewing for a job.
	c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in:
	a. Company's purpose, policies and product.
	b. Duties performed in related jobs.
	c. Labor and professional organizations.
	d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

- a. Punctuality.
- b. Confidentiality.
- c. Honesty.
- d. Cooperation.
- e. Cleanliness of self and work place.
- f. Productivity.
- g. Communication.
- h. Completion of tasks.
- i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in:
	a. Social and interpersonal skills.
	b. Oral and written communication.
	c. Organization and management skills.
	d. Civic responsibilities.
	e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
46.0102 Brick, Block and Stonemasonary

46.0102 Brick, Block and Stonemasonry -- an instructional program that prepares individuals to lay bricks and/or blocks. Includes instruction in laying out and/or spacing bonds; determining vertical and horizontal alignment of courses using guages, plumb-bobs, and levels; and cutting, notching, and shaping blocks, bricks, terra-cotta veneer, glass, and stone to construct or repair walls, partitions, arches, sewers, and fireplaces.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules; recognize the uses of the safety color code; and complete a shop safety inspection.
	1.1 Match terms associated with safety to the correct definitions.
	1.2 Match the colors of the safety code to the correct definitions.
	1.3 List personal safety rules.
	1.4 Use masonry equipment and materials properly.
	1.5 Clean up shop properly.
	1.6 List general shop safety rules.
	1.7 Match possible sources of accidents to the injury which may occur.

	1.8	Complete a shop inspection identifyin unsafe situations and equipment.
2. Use of brick in building.	2.	Describe the development of brick; discuss how brick is used in a modular building system, and list some of the characteristics of modern brick.
	2.1	Describe the development of brick.
	2.2	Explain the raw materials used in making brick.
	2.3	Identify building brick and face brick.
	2.4	Explain how bricks are burned in a kiln.
3. Marking and using concrete blocks.	3.	Describe the methods of making concrete block; explain the use of light weight aggregates used in block, and list uses for concrete block in construction.
	3.1	Describe methods of making concrete block and how they are cured.
	3.2	Explain the characteristics and properties of concrete block, including durability, strength, and fire resistance.
	3.3	Know and explain the sizes of 2, 3, 4, 6, 8, 10 and 12 inch concrete blocks and their typical uses in buildings.

4. Selecting, using and maintaining tools and equipment.

4. Identify and select the proper tools, procedures, and equipment.

    4.1 Identify hand tools and their purposes.

    4.2 Identify power tools and explain their operation.

    4.3 Select the proper tools for the jobs.

    4.4 Demonstrate the proper use of tools and machines, and identify safety precautions.

    4.5 Explain and demonstrate how to properly maintain the tools.

5. Foundation footings and concrete.

5. Build foundation footings and concrete work.

    5.1 Identify ingredients, ratios and consistency of concrete.

    5.2 Estimate materials for footing forms.

    5.3 Estimate concrete for footings.

    5.4 Pour, plane, screed, float and vibrate concrete.

    5.5 Lay out, dig and form footings.

    5.6 Lay out and form a slab.

    5.7 Install expansion joints in concrete.

5.8 Finish concrete by hand in smooth and rought (wood-float) finish.

6. Concrete block buildings.

6. Construct concrete block buildings.

6.1 Identify ingredients, ratios, and consistency of mortar.

6.2 Estimate by rule of thumb, quantity of concrete blocks for block walls.

6.3 Identify different bond patterns in constructing concrete masonry.

6.4 Identify tools and line holders used in constructing block walls.

6.5 Transfer building lines, and square footings.

6.6 Lay out and position pilasters, chases, doors and windows in block walls.

6.7 Gauge masonry wall with a story pole.

6.8 Build concrete block leads.

6.9 Check masonry leads for level and adjustment.

6.10 Lay concrete blocks to the line.

6.11 Cut concrete blocks with hammer, brick set, and masonry saw.

7. brick structures.

6.12 Joint and point block wall.

6.13 Set door bucks in concrete block wall.

6.14 Set window in concrete block walls.

6.15 Build reinforced lintels.

6.16 Install anchor bolts in block walls.

6.17 Parge block walls.

6.18 Identify methods to bond out masonry block walls and to check bond during construction.

6.19 Identify the effect of environmental factors on concrete block structures.

7. Build brick structures.

7.1 Identify ingredients, ratios, and consistency of mortar.

7.2 Identify different bonds and couses in brick masonry.

7.3 Identify different types and sizes of brick.

7.4 Lay out and bond a brick wall.

7.5 Demdnstrate basic knowledge of fireplace theory and construction.

7.6 Demonstrate basic knowledge of arch theory and construction.

	7.7	Demonstrate basic knowledge of chimney theory and construction.
	7.8	Clean brick structures.
	7.9	construct brick veneer wall (build leads and lay to the line).
	7.10	Cut brick with brick set and masonry saw.
	7.11	Gauge brick wall with brick spacing rule or modular rule.
	7.12	Identify different joints in brick masonry.
	7.13	Joint and point a brick wall.
	7.14	Estimate brick for brick wall.
	7.15	Estimate mortar for brick walls.
	7.16	Identify the effects of environmental factors on brick buildings.
8. Estimating.	8.	Estimate cost of materials and labor.
	8.1	Estimate materials for a given job.
	8.2	Estimate equipment needed and the labor costs for a job.
	8.3	Calculate weekly earnings.

9. Skills as masonry helper.	9. Perform the skills of a masonry helper.
	9.1 Mix mortar by hand.
	9.2 Set up power mixer.
	9.3 Mix mortar with power mixer.
	9.4 Maintain and clean power mixer.
	9.5 Stock work area.
	9.6 Build scaffolding.
	9.7 Clean up work area.
10. Application of problem solving skills in in brick, block and stonemasonry.	10. Solve problems in masonry using appropriate materials and formulas.
11. Employability outlook.	11. Identify sources related to:
	a. Wages, salaries and benefits.
	b. Skills needed on the job.
	c. Employment trends.
12. Employability process.	12. Demonstrate skills in:
	a. Finding a job.
	b. Applying and interviewing for a job.
	c. Maintaining a job.

13. Job related information.	13. Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
14. Personal financial management.	14. Compute wages and payroll deductions.
15. Interpersonal relations.	15. Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality. c. Honesty. d. Cooperation. e. Cleanliness of self and work place. f. Productivity. g. Communication. h. Completion of tasks. i. Positive attitudes and enthusiasm toward the job.

16. Vocational student organization membership.	16.1 Identify the advantages of participating in Vocational student organizations. 16.2 Participate as a member of a Vocational student organization.
17. Development of leadership skills through VSO and related activities.	17. Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATON
46.0201 Carpentry

46.0201 Carpentry -- an instructional program that prepares individuals to lay out, fabricate, erect, install, and repair wooden structures and fixtures, using hand and power tools. Includes instruction in common systems of framing, construction materials, estimating, and blueprint reading.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire; recognize the use of the safety color code, and complete a shop safety inspection.
	1.1 Accurately match terms associated with shop safety to correct defintions.
	1.2 Accurately match the colors of the safety color code to the correct applications.
	1.3 List personal safety rules.
	1.4 List general shop safety rules.
	1.5 Match possible sources of accidents to the injury which may occur.
	1.6 Demonstrate or identify the proper procedure should an accident occur.
	1.7 Complete a shop inspection identifying unsafe situations and equipment.

2. Selecting and maintaining tools.	2. Identify and select the proper tools for the job and maintain them in a safe condition. 2.1 Identify hand tools and their purpose. 2.2 Identify power tools and explain their operation. 2.3 Given a basic task, select the proper tool for the job, demonstrate the proper use, and identify safety precautions. 2.4 Given a hand tool or power tool, explain and demonstrate how to properly maintain the tools.
3. Carpentry terminology.	3. Demonstrate knowledge of carpentry terminology, plans and building codes. 3.1 Define carpentry terminology. 3.2 Read, and interpret building sketches. 3.3 Describe and apply building codes.
4. Building foundations.	4. Build founations. 4.1 Lay out building lines and set up stakes for grading. 4.2 Build and place straight concrete forms. 4.3 Line up and brace concrete wall, column, and forms.

	4.4 Build irregular concrete forms.
5. Framing.	5. Build framing.
	5.1 Lay out and frame sills, girders and install termite shield.
	5.2 Frame and set floor joists and install bridging.
	5.3 Lay out walls and partitions.
	5.4 Erect wallls and partitions.
	5.5 Install sheathing and insulation.
6. Roofs.	6. Build roofs.
	6.1 Frame common rafters.
	6.2 Frame valley rafters.
	6.3 Frame hip rafters.
	6.4 Frame jack rafters.
	6.5 Apply sheathing.
7. Identify tools and materials.	7. Identify proper tools and material for specific uses.
	7.1 Determine correct tools and materials, supplies for task.

	7.2 Operate skill saw, electric drill, radial arm and bench saw.
8. Interiors.	8. Install interior finishes.
	8.1 Install doors.
	8.2 Install windows.
	8.3 Install hardware.
	8.4 Install kitchen cabinets.
9. Exteriors.	9. Apply exterior finishes.
	9.1 Build closed cornice.
	9.2 Install composition shingles.
	9.3 Install exterior wall siding.
	9.4 Install exterior doors and windows.
10. Measuring terms and tools.	10. Define measuring terms and identify measuring tools; read and compute in feet, inches and fractions to nearest 1/16.
	10.1 Read a rule to nearest 1/16 inch.
	10.2 Pass a test matching terms.
	10.3 Identify measuring tool and its proper use.

11. Safety on the job.	11. Demonstrate safety on job site. 11.1 Construct scaffolding properly. 11.2 Check hand tools for repair. 11.3 Check power tools for repair.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

- a. Punctuality.
- b. Confidentiality.
- c. Honesty.
- d. Cooperation.
- e. Cleanliness of self and work place.
- f. Productivity.
- g. Communication.
- h. Completion of tasks.
- i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
46.0302 Electrician

46.0302 **Electrician -- an instructional program that prepares individuals to install, operate, maintain and repair electrically-energized systems such as residential, commercial, and industrial electrical-power wiring, and D.C. and A.C. motors, controls, and electrical-distribution panels. Includes instruction in the use of test equipment.**

Program Objective	Standard of Student Expectation
The program will provide instruction in:	**The student will be expect to:**
1. Shop safety.	**1. Recognize unsafe situations; list general shop and personal safety rules, and demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code, and complete a shop safety inspection; identify and select the proper tools and equipment for the job and maintain them in a safe condition.**
	1.1 Practice laboratory and personal safety.
	1.2 Identify tools and test equipment nomenclature and usage.
	1.3 Identify, care for, and use hand tools properly.
	1.4 Identify, care for, and use power equipment properly.
	1.5 Select the proper tool for a job, demonstrate the proper use, and identify safety precautions.
	1.6 Explain and demonstrate how to properly maintain the tools.

Shop safety cont'd.	1.7 Connect and use various meter testing instruments: A. Ammeter B. Voltmeter C. Ohmmeter D. Waltmeter 1.8 Match terms associated with shop safety to the correct definitions. 1.9 Match the colors of the safety color code to the correct applications. 1.10 List personal safety rules. 1.11 List general shop safety rules. 1.12 Match possible sources of accidents to the injury which may occur. 1.13 Demonstrate or identify the proper procedures should an accident occur. 1.14 Complete a shop inspection, identifying unsafe situations and equipment.
2. Knowledge of electricity.	2. Demonstrate their knowledge of electricity. 2.1 Apply principles of electricity: A. Basic electrical theory. B. Ohm's Law - solve problems for unknown voltage, amperage, resistance, and wattage.

C. Two types of basic circuits - series and parallel.

2.2 Describe electrical circuit diagrams.

2.3 Apply National Electrical Code (NEC).

3. Electrical wiring systems.

3. Design electrical wiring systems.

3.1 Calculate number and types of circuits to be used.

3.2 Calculate lighting requirements.

3.3 Use contractor's directions, National Electrical Code, and local ordinances for design.

3.4 Compute serive loads -

A. Balance the total load per phase.

B. Calculate individual circuit load.

C. Compute the size of service entrance conductors.

D. Determine how many convenience and appliance outlets should be on each separate circuit.

3.5 Using the National Electrical Code (NEC):

A. Answer questions related to electrical wiring.

B. Locate allowable ampacities for various conductors using the NEC as a reference.

C. Interpret conduit fill tables.

4. Electrical hardware and circuitry.

4. Install electrical hardware and circuitry.

4.1 Install the following:

A. Circuit breakers.

B. Electrical conduit.

C. Non-metallic sheathed cable.

D. Concealed wiring before floors, walls and ceilings are installed.

E. Various switches and receptacle outlets.

F. Lighting outlets.

G. Various conduits and conductors.

H. High-voltage receptacle.

4.2 Connect power cable to equipment and install grounding leads.

4.3 Assure access to installations for future maintenance.

4.4 Using blueprints and specifications, read a rule, and measure objects.

Electrical hardware and circuitry cont'd.	4.5 Identify types of overcurrent devices, install overcurrent devices, and list requirements and installation of groundfault interrupters (GFI).
	4.6 Install electrical environmental control components, including baseboard heat unit, central electric heat, furnace motor and controls, and line and low voltage thermostat.
	4.7 Install lighting fixtures, including fan controlled by switch, flood lights, lighting dimmer system, heat/vent light, light fixtures, photo-electric control on a light, and pilot light to show when appliance is on.
5. Testing installed circuitry.	5. Test installed circuitry.
	5.1 Maintain existing wiring.
	5.2 Troubleshoot and use various meters.
	5.3 Test and use test equipment.
	5.4 Use test lamp to check circuit continuity.
	5.5 Check action of switches using test equipment.
	5.6 Test for short circuits.
	5.7 Test for proper ground.

Testing installed circuitry cont'd.

5.8 Inspect wiring for burns, cracks or abrasions.

5.9 Manipulate wires to check insulation brittleness.

5.10 Inspect wire straps and attachments.

5.11 Inspect circuitry and/or wiring for overload.

5.12 Repair non-operative or malfunctioning circuits.

5.13 Locate and repair short circuit, open circuit, and open neutral circuit.

6. Electrical controls.

6. Install, inspect and maintain electrical controls.

6.1 Select and install various A.C. electrical controls:

A. Motor controls (two and three wire).

B. Starters (manual and magnetic).

C. Remote controls.

D. Contactors.

E. Time clock.

F. Relays.

G. Photo-cell (electric eye control).

6.2 Install various A.C. motors.

- A. Single phase.
- B. Three phase.
- C. Forward/reverse.

6.3 Inspect, service and troubleshoot circuitry.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

a. Punctuality.

b. Confidentiality.

c. Honesty.

d. Cooperation.

e. Cleanliness of self and work place.

f. Productivity.

g. Communication.

h. Completion of tasks.

i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
46.0501 Plumbing, Pipefitting, and Steamfitting, General

46.0501 Plumbing, Pipefitting, and Steamfitting, General -- an instructional program that generally prepares individuals to lay out, assemble, install, and maintain piping, fixtures, and piping systems for steam, hot water, heating, cooling, drainage, lubricating, sprinkling, and industrial processing systems. Includes instruction in material selection and use of hand tools to cut, bend, join, and weld pipes.

Program Objective

The program will provide instruction in:

1. Shop safety.

Standard of Student Expectation

The student will be expected to:

1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire; recognize the use of the safety color code, and complete a shop safety inspection.

   1.1 Accurately match terms associated with shop safety to the correct definitions.

   1.2 Accurately match the colors of the safety color code to the correct applications.

   1.3 List personal safety rules.

   1.4 List general shop safety rules.

   1.5 Match possible sources of accidents to the injury which may occur.

   1.6 Demonstrate or identify the proper procedures should an accident occur.

   1.7 Complete a shop inspection identifying unsafe situations and equipment.

2. Selection and maintenance of tools.

2.1 Identify hand tools and their purposes.

2.2 Identify power tools and explain their operation.

2.3 Select the proper tool for the job, demonstrate the proper use, and identify safety precautions.

2.4 Explain and demonstrate how to properly maintain the tools.

3. Importance of organizing and planning in plumbing.

3. Demonstrate knowledge and skill in organizing and planning.

3.1 Determine local code requirements for plumbing systems.

3.2 Specify materials for plumbing job.

3.3 Secure permits for installation of plumbing jobs.

4. Joining pipe.

4. Join pipe.

4.1 Demonstrate skill in joining pipe by:

- a. Identifying different terms and definitions used in plumbing.
- b. Identifying different kinds of pipe.
- c. Identifying different types of fittings.
- d. Identifying plumbing tools.

Joining pipe cont'd.

e. Bending flexible copper tubing with spring bender.

f. Bending steel pipe.

g. Cutting and threading pipe to size.

5.2 Demonstrate skill in joining pipe by:

a. Brazing pipe with gas torch and filler metal.

b. Installing cast iron pipe.

c. Cutting and fitting cast iron pipe.

d. Cutting copper tubing and pipe.

e. Joining copper tubing to brass copper and plastic pipe.

f. Joining copper tubing to steel pipe.

g. Joining copper tubing with compressed connectors.

h. Joining plastic pipe using solvent cement method.

i. Joining plastic pipe to steel and copper pipe.

j. Joining pipe with no-hub or band clamp couplings.

Joining pipe cont'd.	k. Joining plastic pipe to cast iron pipe with no-hub couplings. l. Threading steel pipe with adjustable dies, with non-adjustable. m. Threading steel pipe with power-driven vise stand.
5. Hanger and support installation.	5. Install hangers and supports. 5.1 Identify different types of hangers and supports. 5.2 Install pipe sleeves or thimbles through walls, ceilings or floors. 5.3 Secure pipe with hangers both horizontally and vertically to wood, metal, and masonry surfaces.
6. Building water distribution lines.	6. Build water distribution lines. 6.1 Demonstrate skill by installing: a. Water main lines and water meter. b. Cut-off valves. c. Expansion joints. d. Hot and cold water storage tanks. e. Lawn sprinkler system.

Building water distribution lines cont'd.

f. Pressure relief valves.

g. Water lines.

6.2 Rough in:

a. Water supply lines for bathtub.

b. Water supply lines for water closets.

c. Water supply lines for water heaters.

d. Water supply lines for sinks.

e. Water supply lines for wall-mounted urinals.

6.3 Make water pressure test on water supply system.

6.4 Insulate water lines.

7. Building drains.

7. Build drains.

7.1 Calculate the slope required for building sewer lines.

7.2 Establish grades for installing waste lines.

7.3 Lay out trench lines.

7.4 Dig trench for drain lines.

7.5 Install drain lines in trenches.

Building drains cont'd.

7.6 Backfill trenches (after inspection).

7.7 Install septic tank.

7.8 Lay out house drains (waste lines).

7.9 Install waste lines.

7.10 Rough in:

  a. Waste lines and vents for bathtubs.

  b. Waste lines and vents for lavatories.

  c. Waste lines and vents for dishwasher.

  d. Waste lines and vents for floor mounted urinals and water closets.

  e. Waste lines and vents for shower baths.

  f. Waste lines and vents for wall-mounted urinals.

7.11 Run test on house drains.

8. Traps and cleanouts.

8. Install traps and cleanouts.

8.1 Install:

  a. Garbage disposal units.

  b. Grease inceptors in waste lines.

9. Vent installation.	9. Install vents. 9.1 Install: a. Soil or waste back vents. b. Vent terminals (roof-flashing).
10. Fixture installation.	10. Install fixtures. 10.1 Install: a. Built-in lavatories. b. Dishwashers. c. Electric water heaters. d. Flush-valve-type water closet. e. Gas water heater. f. Washing machine. g. Tank-type water closets.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to:
	a. Wages, salaries and benefits.
	b. Skills needed on the job.
	c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in:
	a. Finding a job.
	b. Applying and interviewing for a job.
	c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in:
	a. Company's purpose, policies and product.
	b. Duties performed in related jobs.
	c. Labor and professional organizations.
	d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

a. Punctuality.

b. Confidentiality.

c. Honesty.

d. Cooperation.

e. Cleanliness of self and work place.

f. Productivity.

g. Communication.

h. Completion of tasks.

i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
46.9999 Construction Trades, Other
(General Contracting)

46.9999 Construction Trades, Other -- any instructional program in construction trades not described above.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Identify and use various types of safety in the shop and field; demonstrate First Aid procedures for shop and field injuries.
	1.1 Demonstrate general shop safety.
	1.2 Demonstrate construction site safety.
	1.3 Demonstrate hazardous materials.
	1.4 Demonstrate fire safety.
	1.5 Demonstrate and discuss general First Aid for shop/field injuries.
	1.6 Demonstrate or identify the proper procedures should an accident occur.
2. Basic handtools.	2 Identify and use basic handtools as they relate to the trade.
	2.1 Identify uses of handtools of the trade.
	2.2 Read and measure with rules and squares.
	2.3 Select proper type and size of handtools for the job.

2.4 Demonstrate proper hand tool care and maintenance.

3. Constructing wood joints.

3. Identify and construct miscellaneous wood joints:

   a. Make butt joints.

   b. Make lap joints.

   c. Make miter joints.

   d. Make dado joints.

   e. Bore holes with hand brace using augers and expansion bits.

   f. Drill holes with the portable hand drill.

   g. Bore holes with the drill press.

   h. Install dowels in common wood joints, machine joints, butt, lap, miter, dado, and half-lap.

4. Wood stock and building material.	4. Glue and clamp wood stock with various types of clamps; cut large sheets of building material by way of table and radial arm saws. 4.1 Glue wood stock with various types of clamps. 4.2 Cut irregular shaped patterns with saber and band saws. 4.3 Cut large sheets of building material with table saw. 4.4 Perform various operations with tablesaw. 4.5 Perform various operations with radial arm saw. 4.6 Use white and contact glues.
5. Proper sanding and milling.	5. Identify and select the proper sander and sandpaper grit for the job. 5.1 Plane stock to thickness with single surface planer (surfacer). 5.2 Sand-finish materials by hand. 5.3 Sand surfaces and edges with belt sander.

6. Power tools.	6. Identify the functional parts of power tools, clean and maintain power and hand tools, and identify the early warning signs of tool failure. 6.1 Service and maintain portable power tools, stationary power tools. 6.2 Discuss early warning signs of tool failure.
7. Building codes and permits.	7. Apply for building permits and interpret codes for selected use. 7.1 Apply for permits in sequence of need, using appropriate forms to comply with local building codes and requirements. 7.2 Interpret building codes using local code book to assure conformity with local and state laws.
8. Basic blueprint reading and cost estimation.	8. Read basic blueprints and estimate the materials and the cost for a project or structure. 8.1 Calculate cost and amount of building materials.
9. Inventory.	9. Read inventory and order material from invoice-order forms. 9.1 Check and receive material orders. 9.2 Itemize material orders from plans and specifications for framing materials. 9.3 Fill out material orders.

10. Milled lumber sizing.	10. Identify milled lumber sizing by use of eye or tape measure. 10.1 Identify actual sizes of milled lumber. 10.2 Construct a structural unit using multiview drawings. 10.3 Identify demensioning methods. 10.4 Identify door and window specifications and locations.
11. Basic drafting symbols.	11. Identify basic drafting symbols, locations, sizes, and views; and use basic drafting tools to convey oral instruction into the architectural form for construction use. 11.1 Locate special installations using detail drawings. 11.2 Interpret instructions using pictorial exploded detail drawings. 11.3 Determine the length of a scaled line. 11.4 Sketch a rough detail (thumbnail drawing). 11.5 Sketch working drawings for cabinets. 11.6 Identify American standard plumbing symbols using AIA standards.

Basic drafting symbols cont'd.

11.7 Identify dimensions applicable to masonry materials using AIA standards.

11.8 Identify electrical symbols using National Electrical Code and AIA standards.

11.9 Identify heating, ventilating, and air conditioning installation symbols using ASHRAE and AIA standards.

11.10 Identify standard masonry symbols using AIA standards.

12. Establishing elevations and property boundaries.

12. Pace and tape a lot or building; locate the points of the structure; and use a building level or transit to establish elevations and property boundaries.

12.1 Basic survey a lot by way of pacing and taping.

12.2 Establish elevation reference points fron a bench mark.

12.3 Establish footing grades using builder's level or transit.

12.4 Establish lot property lines.

12.5 Supervise the excavation of a building site.

12.6 Locate building site in relation to property line.

12.7 Lay out building site using transit and local codes and specifications.

13. Footings and foundations.

13. Locate footings and foundations by way of grade stake and batter board construction.

13.1 Locate and mark excavation lines.

13.2 Locate and square corners using triangulation, parallel and diagonal methods.

13.3 Set grade stakes.

13.4 Install batter boards for rough excavation and footings.

13.5 Install batter boards.

13.6 Supervise site preparation for slab-on-ground construction.
13.7 Supervise site preparation for crawl space/basement construction.

14. Mixing and using mortar.

14. Mix mortar by hand and power mixer; lay out and install 4" brick to a line in common bond pattern; and upon completion of task, wash wall with acid.

14.1 Identify and use masonry tools.

14.2 Mix mortar by hand.

14.3 Mix mortar with power mixer.

Mixing and using mortar cont'd.	14.4 Mix slack lime mortar. 14.5 Lay out 4" brick corner. 14.6 Build a 4" brick corner. 14.7 Spread mortar on bricks. 14.8 Build a brick wall. 14.9 Lay a common bond pattern. 14.10 Lay 4" brick wall to a line. 14.11 Wash with acid.
15. Installing block walls.	15. Lay out and install an 8" block wall complete with pilaster, window on door opening, reinforcement material, parge outside walls; construct a pier. 15.1 Mix mortar for block. 15.2 Spread mortar on block. 15.3 Buffer block. 15.4 Lay out and install 8" block wall. 15.5 Lay out and install 8" block corner. 15.6 Install linters and identify types. 15.7 Construct wall with pilaster.

Installing block walls cont'd.	15.8 Construct pier.
	15.9 Construct opening in block wall for door or window.
	15.10 Install block reinforcement.
	15.11 Install wall ties.
	15.12 Parge outside walls.
	15.13 Make masonry repairs.
16. Chimney parts.	16. Discuss and identify the parts to a chimney.
	16.1 Identify procedures for chimney construction.
	16.2 Discuss parts of a chimney.
17. Concrete work.	17. Form, mix ingredients, pour and finish a concrete sidewalk, and identify the propr method for poured staircase construction.
	17.1 Dig out and form up a sidewalk.
	17.2 Mix concrete by hand.
	17.3 Mix concrete with power mixer.
	17.4 Strengthen concrete with reinforcement wire.
	17.5 Finish concrete.

Concrete work cont'd.

17.6 Remove forms.

17.7 Back fill around sidewalk.

17.8 Discuss methods for forming and installing concrete for poured stairs.

18. Framing.

18. Identify and install framing according to Code.

18.1 Identify the framing members used in western platform and slab construction.

18.2 Install sill plates.

18.3 Construct a built-up girder.

18.4 Install box sills.

18.5 Install floor joists.

Framing cont'd.

18.6 Install various types of bridging.

18.7 Identify the various types of approved bridging.

18.8 Lay out and cut wood strip bridging.

18.9 Lay out and frame floor and wall openings.

18.10 Install subflooring.

18.11 Build corner posts, partition tees, jack posts, and lintel headers.

Framing cont'd.

18.12 Lay out, frame, square and brace exterior walls.

18.13 Lay out, frame and install interior partitions.

18.14 Lay out, frame and install a plumbing partition.

18.15 Select, cut and install structural sheating.

18.16 Lay out, cut and install ceiling joists.

18.17 Cut and install all necessary nailors and backers.

19. Roofing.

19. Identify and build roofs.

19.1 Determine, lay out, cut, and install all the components necessary to install a common gable and roof.

19.2 Identify the kinds and types of floor and roof trusses common to residential construction.

19.3 Select, cut and install roof sheathing.

19.4 Install drip edge.

19.5 Select and install the appropriate roofing components.

	19.6 Select and install the necessary gutter and spouting components.
20. Heating and cooling systems.	20. Identify various types of heating and cooling systems used in residential construction. 20.1 Identify various types of heating/cooling systems. 20.2 Select appropriate heating and cooling system using duct plans. 20.3 Cut openings for warm and cold air register using tools to install duct work. 20.4 Install section of ductwork using a print and tools to deliver the heating and/or cooling.
21. Switches and receptacles.	21. Identify and install various types of switches, receptacles, devices, etc. in a residence, according to N.E.C. regulations. 21.1 Install single pole switch controlling lighting circuit (Romex). 21.2 Install three-way switches controlling lighting circuit (Romex). 21.3 Install four-way switches controlling lighting circuit (Romex). 21.4 Lay out and install required number of receptacles for a room.

	21.5 Install switched convenience outlet.
22. Wiring, conduit and fixtures.	22. Identify amd install wiring, conduit and fixtures, according to N.E.C. regulations. 22.1 Identify and install pert of various conduit systems. 22.2 Install branch circuit panl, conductors, and breakers. 22.3 Install meter box. 22.4 Install service cable from meter box to branch circuit panel. 22.5 Install incandescent fixtures. 22.6 Install fluorescent fixtures. 22.7 Install smoke alarm. 22.8 Install wiring for water heater. 22.9 Install wiring for electric range. 22.10 Install wiring for electric based heat.
23. Fastening procedures and materials.	23. Identify and join various types of pipe, tubing, and regulated materials using approved fastening procedures and materials. 23.1 Join copper tubing with compressed connectors.

Fastening procedures and materials cont'd.

23.2 Cut copper tubing and pipe with hacksaw.

23.3 Join copper tubing/pipe to copper pipe/tubing

23.4 Join copper tubing/pipe to plastic pipe, using sweat method.

23.5 Bend copper tubing with spring bender.

23.6 Cut copper tubing and pipe with tubing cutter.

23.7 Join copper tubing to brass pipe.

23.8 Join copper tubing/pipe to plastic pipe.

23.9 Join copper tubing to steel pipe.

23.10 Install cleanouts on drains.

23.11 Rough-in waste lines and vents for bath tubs.

23.12 Rough-in waste and vent lines for floor-mounted water closets.

23.13 Rough-in lines and vents for built-in lavatories.

23.14 Rough-in waste lines for shower baths.

23.15 Rough-in waste lines for wall-mounted urinals.

24. Simple plumbing components.	24. Describe and perform routing maintenance on different types of simple plumbing components.

24.1 Remove obstructions from water closet drains.

24.2 Replace lavatory trap.

24.3 Repair leaking water faucets.

24.4 Repair leaking shower valve.

24.5 Repair water flush valves on water closets.

24.6 Replace pressure control switches on water pump.

24.7 Install pipe sleeves or thimbles through walls, ceilings or floors.

24.8 Secure with hangers horizontal and vertical lines of pipe to masonry surfaces.

24.9 Secure with hangers horizontal and vertical lines of pipe to surfaces.

24.10 Rough-in water supply lines for water heaters.

24.11 Install hot or cold water storage tanks.

24.12 Install cut-off valves.

24.13 Rough-in water supply lines for bath tubs.

Simple plumbing components cont'd.	24.14 Determine National Plumbing Code standards for task. 24.15 Clean obstructions froma lavatory drain. 24.16 Remove obstructions from main drain lines. 24.17 Rough-in water supply lines for water closets.
25. Drywall.	25. Select, hang and finish the appropriate type of drywall in accordance with manufacturer's specifications and building codes. 25.1 Identify various types of drywall and correct use. 25.2 Install drywall. 25.3 Install metal corners for drywall. 25.4 Tape and finish drywall.
26. Insulation.	26. Select and install insulation in accordance with manufacturer's specifications and building codes. 26.1 Identify and install various types of insulation.
27. Trim and accessories.	27. Select and install various types of trim and accessories in accordance with manufacturer's specifications and building codes. 27.1 Set nail with nail set and apply wood filler.

Trim and accessories cont'd.	27.2 Build open cornice. 27.3 Build a (closed) box cornice. 27.4 Install double-hung window frames. 27.5 Glaze windows. 27.6 Install gable trim. 27.7 Discuss and install finished columns, beams, shuttersn, skylights, etc. 27.8 Install outside door trim. 27.9 Discuss various types of siding and calculate cost of siding. 27.10 Install related siding and installation accessories. 27.11 Install siding on gable ends.
28. Doors, windows and hardware.	28. Install multiple types of doors, windows, and related hardware, according to manufacturer's specifications. 28.1 Install prehung doors and windows. 28.2 Install storm doors and windows. 28.3 Hang and install door from scratch. 28.4 Install accessories in walk-in clothes closet.

	28.5 Install door lock sets and other door accessories.
29. Interior trim.	29. Cut and install various types of interior trim.
	29.1 Install paneling and panel trim.
	29.2 Cut and install various types of trim, i.e., base, casing, crown, etc.
	29.3 Identify various types of interior accessories, i.e., railings, mantels, etc.
30. Paints and finishes.	30. Apply different types of paints and finishes, according to manufacturer's specifications and accepted industry standards.
	30.1 Identify types of paint.
	30.2 Identify correct areas of use.
	30.3 Identify brushes, rollers, ladders, and other related equipment.
	30.4 Demonstrate proper surface preparation.
	30.5 Estimate materials and supplies.
	30.6 Apply appropriate paints, finishes, etc. following accepted procedures.

31. Landscaping operations.

31. Describe and perform routing landscaping operations.

31.1 Prepare finish grade using appropriate tools and equipment for proper water drainage and landscape design to provide for a base from which to landscape.

31.2 Lay out and construct any special exterior features (walks, retaining walls, fencing, etc.) using blueprints and appropriate tools and equipment to meet landscape design specifications.

31.3 Locate and construct areas for groups of trees, shrub or flower plantings.

31.4 Locate and plant trees, shrubs and flowers.

31.5 Prepare earth for seeding.

31.6 Apply a balanced fertilizer.

31.7 Apply a blend of grass seed.

31.8 Discuss sod installation and equipment to areas where immediate lawn is required.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

a. Punctuality.

b. Confidentiality.

c. Honesty.

d. Cooperation.

e. Cleanliness of self and work place.

f. Productivity.

g. Communication.

h. Completion of tasks.

i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
47.0101 Electrical and Electronics Equipment Repair, General

47.0101 Electrical and Electronics Equipment Repair, General -- an instructional program that generally prepares individuals to operate, maintain, and repair business machines, communications equipment, major and small appliances, commercial vending machines, and related equipment. Includes instruction in electrical circuitry, simple gearing, linkages and lubrication of machines and appliances, and the use of testing equipment.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code, and complete a shop safety inspection. 1.1 Define terms associated with shop safety. 1.2 Identify the colors of the safety color code and the correct applications. 1.3 List personal safety rules. 1.4 List general shop safety rules. 1.5 Match possible sources of accidents to the injury which may occur. 1.6 Extinguish a fire through the proper use of a fire extinguisher.

	1.7 Complete a shop inspection identifying unsafe situations and equipment.
2. Selecting tools.	2. Identify and select the proper tools for the job and maintain them in a safe condition. 2.1 Identify hand tools and their purpose. 2.2 Identify power tools and explain their operation. 2.3 Given a basic task, select the proper tool for the job, demonstrate the proper use, and identify safety precautions. 2.4 Given a hand tool or power tool, explain and demonstrate how to properly maintain the tools.
3. Knowledge of electricity.	3. Demonstrate their knowledge of electricity. 3.1 Know and apply principles of electricity. 3.2 Interpret electrical circuit diagrams. 3.3 Determine static electricity. 3.4 Examine sources of electricity. 3.5 Calculate resistance of wire. 3.6 Identify resistors by their color code. 3.7 Measure resistors on volt olm meter.

	3.8 Measure D.C. current on a volt olm meter.
	3.9 Measure D.C. voltage on a volt olm meter.
4. Circuit characteristics measurement.	4. Calculate and measure D.C. circuit characteristics.
5. AC and DC current.	5. Demonstrate the difference between AC and DC current.
	5.1 Calculate instantaneous values using trigonometry tables.
	5.2 Analyze relationship between peak, RMS and average values.
	5.3 Analyze energy conversion.
6. Maghetic principles.	6. Demonstrate their knowledge of magnetic principles.
	6.1 Use compass to plot magnetic patterns.
	6.2 Construct electromagnetic.
	6.3 Use relays to perform circuit functions.
7. Operating oscilloscopes.	7. Perform basic operating skills of an oscilloscope.
	7.1 Determine functions of oscilloscope.
	7.2 Measure AC and DC voltage on oscilloscope.
	7.3 Determine frequency and periodic time.

8. Inductance characteristics.	8. Perform experiments for inductance characteristics. 8.1 Analyze the effects of inductance on circuits. 8.2 Construct and analyze inductive and resistive circuits. 8.3 Construct and analyze inductive circuits. 8.4 Calculate inductive reactance. 8.5 Calculate R/L time. 8.6 Construct and analyze a transformer circuit. 8.7 Calculate turns ratio of transformers.
9. Capacitance and capacitive reactance.	9. Perform experiments for capacitance and capacitive reactance. 9.1 Determine capacitance in basic circuits. 9.2 Calculate capacitive reactance. 9.3 Calculate R/C time. 9.4 Construct and analyze capacitive circuits.

11. Using VOM type analog meters.	11.	Construct and test the VOM type analog meter.
	11.1	Determine resistance of a moving-coil meter movement.
	11.2	Calculate shunt resistors for various meters.
	11.3	Construct a meter to measure D.C. current.
	11.4	Calculate multiplier resistors for various volt meters.
	11.5	Construct a meter to measure D.C. voltage.
	11.6	Calculate meter sensitivity.
	11.7	Construct a meter to measure ohms.
12. Mathematics concepts.	12.	Review common fractions and decimals.
	12.1	Review percentage, measurements and ratios.
	12.2	Review algebra.
	12.3	Review scientific notation.
	12.4	Review trigonometry.

13. Employability outlook.	13.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
14. Employability process.	14.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
15. Job related information.	15.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
16. Personal financial management.	16.1 Compute wages and payroll deductions.
17. Interpersonal relations.	17.1 Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality. c. Honesty.

		d. Cooperation.
		e. Cleanliness of self and work place.
		f. Productivity.
		g. Communication.
		h. Completion of tasks.
		i. Positive attitudes and enthusiasm toward the job.
18. Vocational student organization membership.	18.1	Identify the advantages of participating in Vocational student organizations.
	18.1	Participate as a member of a Vocational student organization.
19. Development of leadership skills through VSO and related activities.	19.1	Demonstrate leadership development in:
		a. Social and interpersonal skills.
		b. Oral and written communication.
		c. Organization and management skills.
		d. Civic responsibilities.
		e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
47.0106 Major Appliance Repair

47.0106 Major Appliance Repair -- an instructional program that prepares individuals to repair, install, and service major gas, electric, and microwave consumer appliances such as stoves, refrigerators, dryers, water heaters, washers and dishwashers.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop Safety.	1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code, and complete a shop safety inspection.
	1.1 Accurately match terms associated with shop safety to the correct definitions.
	1.2 Accurately match the colors of the safety color code to the correct applications.
	1.3 List personal safety rules.
	1.4 List general shop safety rules.
	1.5 Match possible sources of accidents to the injury which may occur.
	1.6 Extinguish a fire through the proper use of a fire extinguisher.
	1.7 Complete a shop inspection identifying unsafe situations and equipment.

2. Selection and maintenance of tools.	2. Identify and select the proper tools for the job and maintain them in a safe condition. 2.1 Identify hand tools and their purpose. 2.2 Identify power tools and explain their operation. 2.3 Select proper tools for a job, demonstrate the proper use, and identify safety precautions. 2.4 Explain and demonstrate how to properly maintain tools.
3. Maintaining automatic washers.	3. Service and maintain automatic washers. 3.1 Identify and explain the components of an automatic washer. 3.2 Disassemble, inspect, clean and reassemble an automatic washer. 3.3 Recognize and diagnose problems in a malfunctioning automatic washer through logical testing procedures. 3.4 Using proper tools and proceeding, correct a malfunctioning automatic washer.
4. Servicing automatic dryers.	4. Service and maintain an automatic dryer. 4.1 Identify and explain the components of an automatic dryer.

	4.2 Disassemble, inspect, clean and reassemble an automatic dryer.
	4.3 Recognize and diagnose problems in a malfunctioning automatic dryer through logical testing procedures.
	4.4 Using proper tools and proceeding, correct a malfunctioning automatic dryer.
	4.5 Install an automatic dryer.
5. Servicing automatic washer-dryer combination	5. Service and maintain an automatic washer-dryer combination.
	5.1 Identify and explain the components of an automatic washer-dryer combination.
	5.2 Disassemble, inspect, clean and reassemble an automatic washer-dryer combination.
	5.3 Recognize and diagnose problems in a malfunctioning automatic washer-dryer combination through logical testing procedures.
	5.4 Using proper tools and procedures, correct a malfunctioning automatic washer-dryer combination.
	5.5 Install an automatic washer-dryer combination.

6. Servicing automatic dishwashers.	6. Service and maintain an automatic dishwasher.
	6.1 Identify and explain the components of an automatic dishwasher.
	6.2 Disassemble, inspect, clean and reassemble an automatic dishwasher.
	6.3 Recognize and diagnose problems in a malfunctioning automatic dishwasher through logical testing procedures.
	6.4 Using proper tools and proceedings, correct a malfunctioning automatic dishwasher.
	6.5 Install an automatic dishwasher.
7. Servicing gas and electric ranges.	7. Service and maintain gas and electric ranges.
	7.1 Identify and explain the components of a gas and electric range.
	7.2 Disassemble, inspect, clean and reassemble a gas and electric range.
	7.3 Recognize and diagnose problems in a malfunctioning gas and electric range through logical testing procedures.
	7.4 Using proper tools and proceeding, correct a malfunctioning gas and electric range.
	7.5 Install a gas and electric range.

8. Servicing gas and electric water heaters.	8. Service and maintain gas and electric water heaters. 8.1 Identify and explain the components of a gas and electric water heater. 8.2 Disassemble, inspect, clean and reassemble a gas and electric water heater. 8.3 Recognize and diagnose problems in a malfunctioning gas and electric water heater through logical testing procedures. 8.4 Using proper tools and procedures, correct a malfunctioning gas and electric water heater. 8.5 Install a gas and electric water heater.
9. Servicing Waste Disposers.	9. Service and maintain a waste disposer. 9.1 Identify and explain the components of a waster disposer. 9.2 Disassemble, inspect, clean and reassemble a waste disposer. 9.3 Recognize and diagnose problems in a malfunctioning waste disposer through logical testing procedures. 9.4 Using proper tools and proceeding, correct a malfunctioning waste disposer.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to:
	a. Wages, salaries and benefits.
	b. Skills needed on the job.
	c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in:
	a. Finding a job.
	b. Applying and interviewing for a job.
	c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in:
	a. Company's purpose, policies and product.
	b. Duties performed in related jobs.
	c. Labor and professional organizations.
	d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

- a. Punctuality.
- b. Confidentiality.
- c. Honesty.
- d. Cooperation.
- e. Cleanliness of self and work place.
- f. Productivity.
- g. Communication.
- h. Completion of tasks.
- i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations. 1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
47.0199 Electrical and Electronics Equipment Repair, Other
(RADIO AND TELEVISION REPAIR)

47.0199 Electrical and Electronics Equipment Repair, Other -- any instructional program in electrical and electronics equipment repair not described above.

Program Objective	Standard of Student Expectation.
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code, and complete a shop safety inspection.
	1.1 Accurately match the colors of the safety color code to the correct definitions.
	1.2 Accurately match the colors of the safety color code to the correct applications.
	1.3 List personal safety rules.
	1.4 List general shop safety rules.
	1.5 Match possible sources of accidents to the injury which may occur.
	1.6 Demonstrate or identify the proper procedure should an accident occur.
	1.7 Complete a shop inspection identifying unsafe situations and equipment.

2. Selecting and maintaining tools.	2. Identify and select the proper tools for the job and maintain them in a safe condition. 2.1 Identify hand tools and their purpose. 2.2 Identify power tools and explain their operation. 2.3 Given a basic task, select the proper tool for the job, demonstrate the proper use, and identify safety precautions. 2.4 Given a hand tool or power tool, explain and demonstrate how to properly maintain the tools.
3. TV antenna system repair.	3. Service and repair television antenna systems. 3.1 Install tower, rotor, VHF and/or UHP antenna. 3.2 Install all types of antenna wire, through all types of walls, from the antenna to the television set. 3.3 Install multi-set couplers and amplifiers. 3.4 Install antennas on chimneys, roofs and walls. 3.5 Ground antenna systems.

	3.6 Repair and/or replace all parts of the antenna system.
4. Tape player and record changer repair.	4. Service and repair tape players and record changers. 4.1 Clean, demagnetize, align and/or replace tape head. 4.2 Adjust stylus pressure. 4.3 Check and repair microphone. 4.4 Clean and lubricate R/C drive mechanism. 4.5 Repair broken and shorted wiring, R/C change mechanism, R/C cut-off mechanism, and R/C speed change mechanism. 4.6 Replace cables, cartridge in R/C, stylus in R/C, plugs, tape heads, and drive motors.
5. TV tuner repair.	5. Service and repair TV tuners. 5.1 Replace dial light in television. 5.2 Check and replace tubes and/or transitors in tuner. 5.3 Clean and lubricate tuner.

	5.4 Make a complete visual check of tuner selection. 5.5 Make a complete voltage check of UHF and VHF tuner. 5.6 Replace complete UHF and VHF tuner.
6. Video amplifiers and CRT circuits.	6. Service and repair IF, video amplifiers, video output, and CRT circuits. 6.1 Check AGC applied to VHF and IF circuits. 6.2 Check composite video at output of the detector. 6.3 Check DC level at output of video detector. 6.4 Make a complete ohmmeter analysis. 6.5 Make a complete voltage analysis. 6.6 Follow video from detector output to CRT.
7. SYNC and AGC circuits.	7. Service and repair SYNC and AGC circuits. 7.1 Adjust AGC control. 7.2 Make ohmmeter checks at all test points in the SYNC and AGC circuits. 7.3 Make voltage checks at all test points in the SYNC and AGC circuits.

	7.4 Adjust noise inverter control.
	7.5 Check SYNC, waveform, video at input to AGC circuit and keying pulse at AGC circuit.
	7.6 Use baio box as a substitute for AGC.
8. Vertical and horizontal circuits.	8. Service and repair vertical and horizontal circuits.
	8.1 Adjust high voltage.
	8.2 Adjust horizontal frequency control.
	8.3 Check and adjust focus control.
	8.4 Check and/or replace deflection yokes.
	8.5 Check and/or replace horizontal output transformer.
	8.6 Check vertical SYNC pulse.
	8.7 Check waveforms at input to horizontal output circuits.
	8.8 Check and elinimate high-voltage arcing.
	8.9 Check high-voltage for proper regulation.
	8.10 Check current of horizontal output tube.
	8.11 Check horizontal oscillator frequency.

9. Power supply repairs.

9. Service and repair power supplies.

   9.1 Check and/or replace electrolytic capacitor.

   9.2 Check AC ripple content of power supply.

   9.3 Check AC voltage input to power transformer.

   9.4 Check AC voltage output from power transformer.

   9.5 Check and/or replace automatic degaussing circuit computer.

   9.6 Check and/or replace circuit breakers.

   9.7 Check and/or replace filter choke.

   9.8 Check and/or replace fuses.

   9.9 Check and/or replace on-off switch.

   9.10 Check and/or replace open or shorted rectifier diode.

   9.11 Check DC voltage output from rectifiers.

   9.12 Check regulation of power supply volt.

   9.13 Check the resistance of power supply.

   9.14 Check filament string.

	9.15	Check and/or replace power transformer for shorted or open turns.
10. Audio circuit repair.	10.	Analyze audio symptoms to isolate defective stage.
	10.1	Analyze audio symptoms to isolate defective stage.
	10.2	Clean and/or replace volume control.
	10.3	Complete sound I.F. alignment.
11. Chroma-section servicing.	11.	Perform chroma-section servicing.
	11.1	Adjust color killer.
	11.2	Analyze burst output waveform by using ocilloscope.
	11.3	Analyze color problems from viewing and using color dot-bar generator.
	11.4	Analyze input waveform to color demodulators and phase detector.
	11.5	Analyze output waveform of bandpass amp., 3.58 MHZ oscillator, and the blue, green and red demodulator.
	11.6	Analyze waveform of gating pulse to burst amp., and of the keying pulse to blanker.
	11.7	Check and/or replace color killer tube or transistor.

Chroma-section servicing cont'd.	11.8 Check and/or repair the AGC circuit.
	11.9 Check and/or replace color demodulators.
	11.10 Check color I.F. gain.
	11.11 Check and/or replace color intensity control, oscillator, picture tube, and sync. amplifier.
	11.12 Check and/or relace tube or transistors in red, green, or blue video amplifiers, and the color I.F.
	11.13 Perform a complete degaussing, purity set up, and color convergence.
12. General Servicing.	12. Perform general servicing work.
	12.1 Adjust video service controls.
	12.2 Analyze picture to isolate defective section.
	12.3 Check and adjust customer controls.
	12.4 Clean cabinet.
	12.5 Collect for services.
	12.6 Complete service tickets.
	12.7 Remove chassis.

General servicing cont'd.

12.8 Replace fuse.

12.9 Replace IC network.

12.10 Solder gun tip replacement.

12.11 Replace modules.

12.12 Solder and desolder.

12.13 Splice wires.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.	5.1	Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality. c. Honesty. d. Cooperation. e. Cleanliness of self and work place. f. Productivity. g. Communication. h. Completion of tasks. i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations. 1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
47.0201 Heating, Air Conditioning and Refrigeration Mechanics, General

47.0201 Heating, Air Conditioning and Refrigeration Mechanics, General -- an instructional program that generally prepares individuals to install, repair, and maintain the operating condition of heating, air conditioning, and refrigeration systems.

Program Objective	Standard of Student Expectation
The program will provide instruction in	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code; and complete a shop safety inspection.
	1.1 Accurately match terms associated with shop safety to the correct definitions.
	1.2 Accurately match the colors of the safety color code to the correct applications.
	1.3 List personal safety rules.
	1.4 List general shop safety rules.
	1.5 Match possible sources of accidents to the injury which may occur.
	1.6 Demonstate or identify the proper procedure should an accident occur.
	1.7 Complete a shop inspection identifying unsafe situations and equipment.

2. Tool selection and maintenance.	2. Identify and select the proper tools for the job and maintain them in a safe condition. 2.1 Identify hand tools and their purposes. 2.2 Identify power tools and explain their operation. 2.3 Select the proper tool for the job, demonstrate the proper use, and identify safety precautions. 2.4 Explain and demonstrate how to properly maintain the tools.
3. Refrigeration system repair.	3. Maintain and repair a refrigeration system. 3.1 Identify and explain the components of a refrigeration system. 3.2 Disassemble, inspect, clean and reassemble a refrigeration system. 3.3 Recognize and diagnose problems in a malfunctioning refrigeration system through logical testing procedures. 3.4 Using proper tools and procedures, correct a malfunctioning refrigeration system.
4. Motor repair.	4. Maintain and repair a motor. 4.1 Identify and explain the components of a motor. 4.2 Disassemble, inspect, clean and reassemble a motor.

	4.3 Recognize and diagnose problems in a malfunctioning motor through logical testing procedures.
	4.4 Using proper tools and procedures, correct a malfunctioning motor.
5. Heating system repair.	5. Maintain and repair a heating system.
	5.1 Identify and explain the components of a heating system.
	5.2 Disassemble, inspect, clean and reassemble a heating system.
	5.3 Recognize and diagnose problems in a malfunctioning heating system through logical testing procedures.
	5.4 Using proper tools and procedures, correct a malfunctioning heating system.
6. Evaporator repair.	6. Maintain and repair an evaporator.
	6.1 Identify and explain the components of an evaporator.
	6.2 Disassemble, inspect, clean and reassemble an evaporator.
	6.3 Recognize and diagnose problems in a malfunctioning evaporator through logical testing procedures.

6.4 Using proper tools and procedures, correct an evaporator.

7. Condenser repair.

7. Maintain and repair a condenser.

7.1 Identify and explain the components of a condenser.

7.2 Disassemble, inspect, clean and reassemble a condenser.

7.3 Recognize and diagnose problems in a malfunctioning condenser through logical testing procedures.

7.4 Using proper tools and procedures, correct a condenser.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.	5.1 Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality. c. Honesty. d. Cooperation. e. Cleanliness of self and work place. f. Productivity. g. Communication. h. Completion of tasks. i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
47.0599 Stationary Energy Sources, Other
(Power Plant Operations)

47.0599 Stationary Energy Sources, Other -- any instructional program in stationary energy sources not described. It is a program that prepares individuals to install, operate, and maintain large power sources for such purposes as generating electricity, pumping and heating.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Occupational outlook.	1. List facts concerning the occupational outlook for power plant operations, select places of employment; list requirements for entry into the power plant operations program and select steps involved in shop work. 1.1 List three facts concerning the occupational outlook. 1.2 Select places that employ power plant operators. 1.3 List student requirements for the power plant operation program. 1.4 Select steps involved in power plant operations shop work. 1.5 List power plant operation applications. 1.6 Complete a personal information sheet.

2. Shop safety.	2. Recognize unsafe situations, list general shop and personal safety rules, and demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code, and complete a shop safety inspection. 2.1 Accurately match terms associated with shop safety to the correct definitions. 2.2 Accurately match the colors of the safety color code to the correct applications. 2.3 List personal safety rules. 2.4 List general shop safety rules. 2.5 Match possible sources of accidents to the injury which may occur. 2.6 Complete a shop inspection identifying unsafe situations and equipment. 2.7 Demonstrate or identify the proper procedure should an accident occur.
3. Selection and maintenance of tools.	3. Identify and select the proper tools for the job and maintain them in a safe condition. 3.1 Idenify hand tools and their purpose. 3.2 Identify power tools and explain their operation. 3.3 Select the proper tool for a job, demonstrate the proper use, and identify safety precautions.

	3.4 Explain and demonstrate how to properly maintain tools.
4. General maintenance duties.	4. Perform general maintenance duties. 4.1 Demonstrate skill in the following: a. Cut metal using acetylene torch. b. Electric weld. c. Braze pipe. d. Cut and thread pipe. e. Make a gasket. f. Install packing in a valve. g. Disassemble and reassemble valves. h. Clean fuel oil strainers. i. Clean a rotary cup oil burner. j. Steam clean fire box. k. Brush and vacuum boiler tubes. l. Read pressure gauge. m. Test feedwater. n. Mix chemicals for boiler treatment. o. Change lubricating oil in gearbox.

	p. Paint with brush and roller. q. Change oil in air compressor. r. Replace belts. s. Replace solenoid coil. t. Measure voltage with voltmeter. u. Measure amperage with ampemeter. v. Replace boiler guage glass. w. Replace boiler refractories. x. Replace motor bearings. y. Take flue gas readings.
5. Combustion process and equipment.	5. Demonstrate knowledge of the combustion process and equipment. 5.1 Identify and explain purpose of equipment in the boiler room. 5.2 Identify and explain purpose, type, location and use of power plant equipment. 5.3 Explain combustion process and equipment, including normal and emergency operations.
6. Student organizations.	6. Participate in student organization activities. 6.1 Identify leadership qualities.

Student organizations cont'd.

6.2 Demonstrate a positive attitude toward work.

6.3 Identify and perform a school or community service.

6.4 Identify the four main officers of a club and explain their role.

6.5 Demonstrate skill in interviews by a prospective employer, club adviser, or other individual for a job.

6.6 Identify and carry out at least four parliamentary procedures.

6.7 Participate in at least two club activities.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

a. Punctuality.

b. Confidentiality.

c. Honesty.

d. Cooperation.

e. Cleanliness of self and work place.

f. Productivity.

g. Communication.

h. Completion of tasks.

i. Positive attitudes and enthusiasm toward the job.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
47.0602 Aircraft Mechanics

47.0602 Aircraft Mechanics -- an instructional program that prepares individuals to inspect, repair, service, and overhaul all airplane parts, including engines, propellers, instruments, airframes, fuel and oil tanks, control cables, and hydraulic units. This program is designed to meet Federal Aviation Administration requirements for licensing as an airframe/power-plant mechanic.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules, and demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code, and complete a shop safety inspection. 1.1 Accurately match terms associated with shop safety to the correct definitions. 1.2 Accurately match the colors of the safety color code to the correct applications. 1.3 List general shop safety rules. 1.4 List personal safety rules. 1.5 Match possible sources of accidents to the injury which may occur. 1.6 Demonstrate or identify the proper procedures should an accident occur. 1.7 Complete a shop inspection identifying proper methods, situations and equipment.

2. Selection and maintenance of tools.	2. Identify and select the proper tools for the job and maintain them in a safe condition. 2.1 Identify hand tools and their purposes. 2.2 Identify power and pneumatic tools and explain their operation. 2.3 Select the proper tool for the job, demonstrate the proper use, and identify safety precautions. 2.4 Explain and demonstrate how to properly maintain the tools.
3. Baggage compartments and fuel tanks.	3. Select and apply the correct formula and compute the volume of the baggage compartment and fuel tank. 3.1 Select correct formulas. 3.2 Apply the formula selected to solve the given problems. 3.3 Compute the volume of two baggage compartment problems and two fuel tanks.
4. Piston displacement.	4. Compute the piston displacement of an aircraft engine. 4.1 Determine formula for computing volume of cylinder. 4.2 Identify specifications for bore, stroke, and number of cylinders on a tropical A/C engine.

	4.3 Compute the displacement of a given aircraft engine to within one cubic inch.
5. Interpreting dimensions.	5. Locate and interpret any dimensions appearing on the drawing, including the application of any limits on tolerance to the dimension.
	5.1 Identify information from a given drawing.
	5.2 Interpret all dimensions without error.
	5.3 Identify limits and tolerances applicable to drawing.
6. Relationship of pressure, area and force.	6. Indicate in a diagram the relationship between pressure, area, and force as applied to the transmission of power in a hydraulic system.
	6.1 Identify information from the diagram for a given system.
	6.2 Explain with arrows on the diagram the relationship between pressure and the rate of flow of liquid through an orifice.
	6.3 Label the diagram.
7. Calculating current flow.	7. Hook up and read the current flow through resistors, calculate the voltage drop across each resistor and check answers with a voltmeter.
	7.1 Identify types of resistors (by color bands).

Calculating current flow cont'd.	7.2 Select meter to solve problems.
	7.3 Calculate resistance.
	7.4 Check resistance with meter.
	7.5 Compare answers between calculators and voltmeters.
8. Inspections.	8. Perform inspections using appropriate inspection tools to detect wear or deterioration in used or worn aircraft parts.
	8.1 Select specifications for given parts.
	8.2 Select appropriate inspection tools.
	9.3 Inspect parts to determine wear.
	9.4 Compare inspection results with given specifications.
9. Installing hardware.	9. Calculate the correct length of bolts to install and torque value for hardware being used.
	9.1 Identify hardware, necessary bolts and nuts by length, diameter, and type threads.
	9.2 Select and identify correct tools for application being made.
	9.3 Install hardware as instructed.

	9.4 Determine torque valve for hardware being used.
10. Clearing materials.	10. Select the correct cleaning material for steel, aluminum, telanium and magnesium parts.
	10.1 Select reference information for each type of material.
	10.2 Demonstrate ability to identify approved cleaners and brightness.

	10.3 Interpret instructions.
	10.4 Use approved cleaners.
11. Forming flares.	12. Form a single flare at one end of tubing and a double flare at the other end of a given piece of Aircraft Aluminum tubing.
	11.1 Identify safety precautions for using flaring tools.
	11.2 Select flaring tools.
	11.3 Flare tube with a single flare.
	11.4 Flare tube with a double flare.
	11.5 Inspect flares according to specifications.
12. Specification sheets.	12. Locate and interpret specification sheets for five given aircraft by manufacturer's name, model, and serial number.
	12.1 Locate specification sheets.
	12.2 Select sheets for each aircraft.
	12.3 Identify information necessary and solve problems.
	12.4 Compare information between the different aircraft.

13. Service and maintain aircraft and ground support equipment.	13. Perform maintenance procedures on reciprocating aircraft and ground support equipment.
	13.1 Explain the importance of and set up a maintenance schedule.
	13.2 Service and perform maintenance, using correct procedure on a typical reciprocating engine.
	13.3 Service and perform maintenance, using correct procedures, on the supporting system of a reciprocating engine.
14. Service and maintenance of turbine aircraft and ground support equipment.	14. Perform maintenance procedures on turbine aircraft and ground support equipment.
	14.1 Explain the importance of and set up a maintenance schedule.
	14.2 Service and perform maintenance, using correct procedures on a typical turbine engine.
	14.3 Service and perform maintenance, using correct procedures, on the supporting system of a turbine engine.

15. Regulations and limitations of mechanic certification.	15. Interpret the regulations governing issuance, duration, experience and limitations of mechanic's certificates; answer questions based on FAR 65. 15.1 Select regulation (FAR PART 65). 15.2 Identify information in FAR 65. 15.3 Answer questions provided.
16. Aircraft inspection.	16. Conduct an inspection of an aircraft; prepare the condition report to indicate the results of the inspection. 16.1 Identify aircraft type with manufacturers specifications. 16.2 Identify service problem for that aircraft. 16.3 Inspect the aircraft. 16.4 Complete a report for that aircraft service problem.
18. Weight and balance records.	17. Examine weight and balance records for a given aircraft; determine if the records are complete, accurate and current. 17.1 Examine the records given for a particular aircraft. 17.2 Determine if the records contain all information pertinent to that aircraft. 17.3 Determine if the information is accurate and up to date.

17.4 Compare information for that particular aircraft to the manufacturer's specifications.

18. Reciprocating engines.

18. Identify basic parts and explain the operations of the reciprocating engine.

- 18.1 Match engine operating principles to the correct definitions.
- 18.2 Identify basic parts of a reciprocating engine.
- 18.3 Match basic reciprocating engine parts to their functions.
- 18.4 Explain the operation of the reciprocating engine.

19. Turbine engines.

19. Identify basic parts and explain the operation of the turbine engine.

- 19.1 Match engine operating principles to the correct definitions.
- 19.2 Identify basic parts of a turbine engine.
- 19.3 Match basic turbine engine parts to their functions.
- 19.4 Explain the operation of the turbine engine.

20. Engine accessories.	20. Inspect the engine and accessories and determine whether the authorized directions have been complied with. 20.1 Identify log book and maintenance records for the specific engines. 20.2 Select A.D. volumes pertinent to engine given. 20.3 Identify A.D.'s that are applicable to the engine and accessories. 20.4 List all A.D.'s that comply. 20.5 Inspect engine and accessories to determine if A.D.'s have been complied with.
21. Lubricating systems.	21. Demonstrate skills in testing and correcting malfunctions within the lubricating system. 21.1 Identify components of the lubricating system. 21.2 Disassemble, inspect, clean, and reassemble a lubricating system. 21.3 Recognize and diagnose problems in a malfunctioning lubricating system through logical testing procedures. 21.4 Using proper tools and procedures, correct a malfunctioning lubricating system.
22. Fuel system.	22. Demonstrate skills in testing and correcting malfunctions within the fuel system, 22.1 Identify components of the fuel system.

Fuel systems cont'd.	22.2 Disassemble, inspect, clean, and reassemble a fuel system.
	22.3 Recognize and diagnose problems in malfunctioning fuel system through logical testing procedures.
	22.4 Correct a malfunctioning fuel system.
23. Cooling system.	23. Demonstrate skill in correcting malfunctions within the cooling system.
	23.1 Identify components of the cooling system.
	23.2 Disassemble, inspect, clean, and reassemble a cooling system.
	23.3 Recognize and diagnose at least four problems in malfunctioning cooling system through logical testing procedures.
	23.4 Using proper tools and procedures, correct a malfunctioning cooling system.
24. Exhaust system.	24. Demonstrate skills in testing and correcting malfunctions within the exhaust system.
	24.1 Identify components of the exhaust system.
	24.2 Disassemble, inspect, clean, and reassemble an exhaust system.

Exhaust system cont'd.

24.3 Recognize and diagnose at least four problems in a malfunctioning exhaust system through logical testing procedures.

24.4 Correct a malfunctioning exhaust system.

25. Ignition systems.

25. Demonstrate skills in testing and correcting malfunctions within the ignition.

25.1 Identify components of the ignition system.

25.2 Disassemble, inspect, clean, and reassemble an ignition system.

25.3 Recognize and diagnose problems in a malfunctioning ignition system through logical testing procedures.

25.4 Using proper tools and procedures, correct a malfunctioning ignition system.

26. Electrical systems.

26. Demonstrate skills in testing and correcting malfunctions within the electrical systems.

26.1 Identify components of the electrical system.

26.2 Disassemble, inspect, clean, and reassemble an electrical system.

26.3 Recognize and diagnose problems in a malfunctioning electrical system through logical testing procedures.

	26.4 Correct a malfunctioning electrical system.
27. Induction system.	27. Demonstrate skills in testing and correcting malfunctions within the induction system.
	27.1 Identify components of the induction system.
	27.2 Disassemble, inspect, clean, and reassemble an induction system.
	27.3 Recognize and diagnose at least four problems in malfunctioning induction system through logical testing procedures.
	27.4 Correct a malfunctioning induction system.
28. Instrument system.	28. Demonstrate skills in testing and correcting malfunctions within the instrument system.
	28.1 Identify components of the instrument system,
	28.2 Disassemble, inspect, clean, and reassemble an instrument system.
	28.3 Recognize and diagnose problems in a malfunctioning instrument system through logical testing procedures.

29. Engine fire detection system.	29. Test the operation of an engine fire detection system, check continuity of the circuit, check individual fire detectors, locate and correct a malfunctions. 29.1 Identify engine fire detection system. 29.2 Select the manufacturer's publications for the fire detection system being used. 29.3 Select tools needed to complete the project. 29.4 Check the continuity of the circuit using a volt ohm meter. 29.5 Determine the malfunction in the system. 29.6 Correct the malfunction according to manufacturer's recommendation.
30. Propeller standards.	30. Inspect and correctly judge whether the propeller meets return-to-service standards; smooth nicks, cuts and scratches in the leading and trailing edges of metal propeller blades. 30.1 Select the manufacturer's specifications for a given propeller. 30.2 Inspect the propeller according to the manufacturer's specifications. 30.3 Identify the discrepancies of the propeller. 30.4 Correct problems found during the inspection.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to:
	a. Wages, salaries and benefits.
	b. Skills needed on the job.
	c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in:
	a. Finding a job.
	b. Applying and interviewing for a job.
	c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in:
	a. Company's purpose, policies and product.
	b. Duties performed in related jobs.
	c. Labor and professional organizations.
	d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.	5.1 Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality. c. Honesty. d. Cooperation. e. Cleanliness of self and work place. f. Productivity. g. Communication. h. Completion of tasks. i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations. 1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
47.0603 Auto Body Repair

47.0603 Auto Body Repair -- an instructional program that prepares individuals to repair body and fenders of automobiles. Includes instruction in body preparation for painting and finishing.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules and demonstrate correct fire extinguisher use in case of fire; recognize the use of the safety color code and complete a shop safety inspection.
	1.1 Accurately match terms associated with shop safety to correct definitions.
	1.2 List personal safety rules.
	1.3 List general shop safety rules.
	1.4 Match possible sources of accidents to the injury.
	1.5 Demonstrate or identify the proper procedures should an accident occur.
	1.6 Complete a shop inspection identifying unsafe situations and equipment.
2. Selecting and maintaining tools.	2. Identify and select the proper tools for the job and maintain them in a safe condition.
	2.1 Identify each hand tool and its purpose.

	2.2 Identify power tools and explain their purpose.
	2.3 Given a basic task, select the proper tool for the job, demonstrate the proper use, and identify safety precautions.
	2.4 Given a hand tool or power tool, explain and demonstrate how to properly maintain the tools.
3. Body repairs.	3. Perform body repairs, replacement and alignment.
	3.1 Straighten deformed auto body sheet metal.
	3.2 Remove and replace and align hood panel.
	3.3 Remove, replace hood hinges.
	3.4 Remove, replace and align deck lid panel.
	3.5 Remove and replace radiator.
	3.6 Remove, replace and align bumper assembly.
	3.7 Remove, replace and align front fender.
	3.8 Remove and replace front wheel house panel.
	3.9 Remove and replace unibody panels.
4. Cost estimating.	4. Perform cost estimating.
	4.1 Prepare estimate form.

	4.2 Estimate cost of repairs using estimate guide.
	4.3 Identify all body parts and panels.
5. Replacing headlamps.	5. Repair and align mechanical headlamps.
	5.1 Remove and replace headlamp sealed beam.
	5.2 Align headlamps.
6. Metal working and welding.	6. Perform metal working and welding operations.
	6.1 Fill and smooth depressed areas with body filter.
	6.2 Pick, file and finish metal.
	6.3 Repair rusted area.
	6.4 Fusion and non-fusion welding of body parts.
	6.5 Spot weld sheet metal panels.
	6.6 Mix weld sheet metal panels.
7. Trim and accessories.	7. Repair, replace, adjust and install trim and acessories.
	7.1 Replace molding and hardware.
	7.2 Remove and replace grill assembly.
	7.3 Remove and replace hood catch and safety mechanism.

	7.4	Repair and replace seat and shoulder belts.
8. Painting and refinishing operation.	8.	Perform painting and refinishing operation.
	8.1	Mask section and parts.
	8.2	Apply corrosion material.
	8.3	Clean and prepare repaired areas for painting.
	8.4	Sand primer-surfacer for painting.
	8.5	Feather edge, apply primer-surfacer.
	8.6	Refinish body panels using acrylic lacquer.
	8.7	Refinish body panel using synthetic enamel.
	.8	Refinish body panel using acrylic enamel.
9. Glass installation.	9.	Remove and install glass.
	9.1	Remove damaged glass, install replacement.
	9.2	Seal leaks around windshield and rear window.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.	5.1 Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality. c. Honesty. d. Cooperation. e. Cleanliness of self and work place. f. Productivity. g. Communication. h. Completion of tasks. i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
47.0604 Automotive Mechanics

47.0604 Automotive Mechanics -- an instructional program that prepares individuals to engage in the servicing and maintenance of all types of automobiles. Includes instruction in the diagnosis of malfunctions in and repair of engines; fuel, electrical, cooling, and brake systems; and drive train and suspension system. Also instruction is given in the adjustment and repair of individual componenets and systems such as radiators, transmissions, and carburetors.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situation; list general shop and personal safety rules ; recognize the uses of the safety color code, and complete a shop safety inspection.
	1.1 Accurately match terms associated with shop safety to the correct definitions.
	1.2 Accurately match the colors of the safety color code to the correct applications.
	1.3 List personal safety rules.
	1.4 Demonstrate or identify the proper procedure should an accident occur.
2. Application of fasteners.	2. Select and identify proper fasteners and their application.
	2.1 Distinguish the difference between SAE, USS and metric nuts, bolts and fasteners.
	2.2 Identify fasteners by their correct sizes.

	2.3 Explain and demonstrate the correct procedure for repairing damaged or broken threads and fasteners.
3. Selection and maintenance of tools.	3. Identify and select the proper tools for the job and maintain them in a safe condition.
	3.1 Identify hand tools and their purpose.
	3.2 Identify power tools and explain their operation.
	3.3 Given a basic task, select the proper tools for the job, demonstrate the proper use, and identify safety precaution.
	3.4 Given a hand tool or power tool, explain and demonstrate how to properly maintain the tools.
4. Principles of gasoline and diesel engines.	4. Explain gasoline and diesel engine principles.
	4.1 Explain the operation of the internal combustion engine.
	4.2 Explain the basic difference between diesel and gas engine operating principles.
	4.3 Service and perform routine maintenance on gasoline and diesel engines.
5. Engine overhaul.	5. Perform engine overhaul activities.
	5.1 Replace engine mounts.
	5.2 Remove engine from vehicle.
	5.3 Disassemble engine.

Engine overhaul cont'd.

5.4 Clean and check condition of engine parts.

5.5 Replace oil pan.

5.6 Replace oil pump.

5.7 Replace camshaft.

5.8 Replace crankshaft and main bearings.

5.9 Perform operational inspection of engine lubrication system - check engine oil pressure with external gauge.

5.10 Replace piston.

5.11 Replace connecting rods and bearings.

5.12 Inspect head for warpage.

5.13 Replace valves.

5.14 Check valve guides for wear.

5.15 Grind valves.

5.16 Machine valve seats.

5.17 Adjust valves.

5.18 Diagnose valve train and head malfunctions.

5.19 Perform cylinder compression test.

5.20 Perform cylinder balance test.

	5.21 Perform cylinder leakage test.
	5.22 Perform operational inspections of positive crankcase ventilation system.
6. Exhaust system.	6. Perform exhaust system repairs.
	6.1 Inspect exhaust system.
	6.2 Heat and remove seized exhaust manifold nuts.
	6.3 Replace exhaust manifold(s).
	6.4 Replace muffler(s) or catalytic converters.
	6.5 Replace tailpipe assembly.
7. Cooling systems.	7. Maintain and repair cooling systems.
	7.1 Check coolant temperature.
	7.2 Check coolant freezing point.
	7.3 Pressure test cooling system.
	7.4 Check overflow tank for correct level.
	7.5 Flush cooling system.
	7.6 Inspect, adjust, or replace fan belt.
	7.7 Replace radiator hoses.

Cooling systems cont'd.

7.8 Replace heater hoses.

7.9 Test thermostat.

7.10 Replace thermostat.

7.11 Replace radiator.

7.12 Replace water pump

7.13 Replace variable speed fan.

7.14 Replace core plugs (freeze plugs).

8. Fuel systems.

8. Maintain and repair fuel systems.

8.1 Inspect, service, or replace carburetor air cleaner.

8.2 Replace fuel filter.

8.3 Repair or replace fuel lines and hoses.

8.4 Measure fuel flow and pressure.

8.5 Replace fuel pump.

8.6 Adjust carburetor.

8.7 Inspect, clean, and adjust choke unit (automatic).

Fuel systems cont'd.	8.9 Service or repair carburetor.
	8.10 Recondition carburetor.
	8.11 Perform operational inspection of evaporative emission control system.
	8.12 Perform operational inspection of exhaust emission control system.
	8.13 Repair or replace manifold heat control units.
	8.14 Identify basic fuel injection systems and components.
9. Automatic transmissions.	9. Maintain and repair automatic transmissions.
	9.1 Perform operational test on automatic transmission.
	9.2 Clean and visually inspect transmission.
	9.3 Replace and adjust modulator.
	9.4 Replace neutral safety switch.
	9.5 Service the transmission filter.
	9.6 Make band adjustments (internal or external).
	9.7 Replace automatic transmission, rear external seal.

Automatic transmissions cont'd.

9.8 Inspect and repair automotive transmission cooling system lines.

9.9 Replace automatic transmission cooler (external type).

9.10 Replace automatic transmission.

9.11 Replace torque converter.

9.12 Replace front pump seal and bushings.

10. Power trains.

10. Maintain and repair power trains.

10.1 Check lube levels in manual transmission and rear axle.

10.2 Inspect clutch and adjust free travel.

10.3 Replace clutch release bearings (throw-out bearings).

10.4 Replace mechanical-type clutch.

10.5 Replace pilot bearing.

10.6 Adjust hydraulic-type clutch.

10.7 Inspect drive shaft, U joints, and center support bearings.

10.8 Replace universal joints.

Power trains cont'd.

10.9 Test manual transmission operation.

10.10 Replace transmission mounts.

10.11 Adjust external shift linkage on manual transmission.

10.12 Replace manual transmission rear seal, gasket, and bushing.

10.13 Replace manual transmission.

10.14 Lubricate speedometer cable and housing.

10.15 Replace front drive axle assembly.

10.16 Diagnose and replace front drive axle boots and/or axle shafts.

10.17 Diagnose differential malfunctions and noise problems.

10.18 Replace pinion seal.

10.19 Replace rear axle shaft, bearing, and seal.

11. Steering units.

11. Maintain and repair standard and power steering units.

11.1 Lubricate steering gear and linkage.

11.2 Check manual steering gear fluid level.

11.3 Inspect steering gear.

Steering units cont'd.	11.4 Adjust worm and sector in steering gear.
	11.5 Inspect steering linkage.
	11.6 Replace belts and adjust tension.
	11.7 Replace manual steering gear components.
	11.8 Replace steering spindles.
	11.9 Replace power steering pump.
	11.10 Replace power steering component.
12. Front end suspension.	12. Maintain and repair front end suspension.
	12.1 Lubricate the front suspension and ball joints.
	12.2 Balance wheels and tires.
	12.3 Repack and adjust front wheel bearings.
	12.4 Replace front wheel bearing grease seals.
	12.5 Replace shock absorbers and bushings.
	12.6 Perform visual inspections of the suspension system.
	12.7 Replace ball joints.
	12.8 Replace front suspension control arms and bushings.

Front end suspension cont'd.

12.9 Inspect and replace steering damper.

12.10 Replace torsion bars.

12.11 Adjust torsion bars.

12.12 Identify the three (3) adustable alignment angles in front end geometry.

12.13 Check and align front end.

13. Braking systems.

13. Maintain and repair braking systems.

13.1 Perform operational brake inspection and check master cylinder fluid level.

13.2 Adjust brakes.

13.3 Inspect and refinish brake drums.

13.4 Replace brake shoes.

13.5 Inspect and replace self-adjusters.

13.6 Rebuild wheel cylinder.

13.7 Replace wheel cylinder.

13.8 Repair master cylinder.

13.9 Replace master cylinder.

13.10 Replace hydraulic control valves.

Braking system cont'd.

13.11 Replace hydraulic booster assembly.

13.12 Bleed hydraulic brakes.

13.13 Replace parking brake cables.

13.14 Adjust parking brake linkage.

13.15 Inspect and replace brake pads (disc brakes).

13.16 Inspect and turn rotor (disc brakes).

13.17 Repair disc brake caliper.

14. Electrical systems.

14. Maintain and repair electrical systems.

14.1 Correctly operate basic electrical test equipment.

14.2 Inspect and test ignition switch, resistor, wiring and coil of the primary circuit.

14.3 Set ignition timing.

14.4 Replace ignition coil.

14.5 Inspect secondary circuit lead wires, distributor cap, and rotor, and measure resistance in secondary wires.

14.6 Inspect contact points and condenser of the primary circuit.

Electrical systems cont'd.

14.7 Replace ignition points and condenser.

14.8 Clean and gap spark plugs.

14.9 Test and repair electronic ignition systems.

14.10 Analyze and adjust engine using engine analyzer.

14.11 Replace and adjust distributor.

14.12 Evaluate alternator and regulator output.

14.13 Replace alternator.

14.14 Repair alternator.

14.15 Replace charging system regulator.

14.16 Service or replace and test batteries, cables.

14.17 Replace and test starter.

14.18 Replace solenoid.

14.19 Analyze malfunctions in the cranking systems.

14.20 Repair starter.

14.21 Perform operational inspection of lighting system.

Electrical systems cont'd.	14.22 Adjust headlights. 14.23 Adjust or replace back-up light switch. 14.24 Repair or replace lighting system components. 14.25 Replace switches. 14.26 Replace flasher unit. 14.27 Locate and repair short or open circuit in wiring. 14.28 Inspect and test windshield wiper motor, blaces and arms. 14.29 Repair windshield wiper mechanisms and controls.
15. Air conditioners and heaters.	15. Maintain and repair automobile air conditioners and heaters. 15.1 Leak-test system. 15.2 Diagnose air conditioning malfunctions with appropriate gauges and test equipment. 15.3 Evacuate air conditioning systems. 15.4 Inspect and recharge system with refrigerant.

Air conditioners and heaters cont'd.	15.5 Replace dryer in air conditioning unit.
	15.6 Replace air conditioning compressor.
	15.7 Replace compressor seal and o-rings.
	15.8 Replace condenser in air conditioning unit.
	15.9 Replace expansion valve in air conditioning unit.
	15.10 Check and repair vacuum system.
	15.11 Repair electrical circuit.
	15.12 Replace air conditioner fan motor.
	15.13 Replace air conditioner control cables.
	15.14 Diagnose heating system malfunctions.
	15.15 Diagnose defective heater core.
	15.16 Replace heater core.
	15.17 Service heater control components.
16 Gas welding equipment.	16. Set up, operate and maintain gas welding equipment safely.
	16.1 Adjust acetylyne and oxygen regulators and gauges to operate in a safe manner.

Gas welding equipment cont'd.

16.2 Clean and change tips for correct application.

16.3 Demonstrate proper techniques for lighting torch, extinguishing flame and shutting down tanks.

16.4 Demonstrate proficiency in basic heating and cutting for removal of seized parts.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

- a. Punctuality.
- b. Confidentiality.
- c. Honesty.
- d. Cooperation.
- e. Cleanliness of self and work place.
- f. Productivity.
- g. Communication.
- h. Completion of tasks.
- i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations. 1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
47.0605 Diesel Engine Mechanics

47.0605 Diesel Engine Mechanics -- an instructional program that prepares individuals to repair diesel engines in vehichles such as buses, ships, trucks, railroad locomotives, and construction equipment, and to repair stationary diesel engines in electrical generators and related equipment. Includes instruction in diagnosing malfunctions; disassembling engines and replacing parts; and in repairing and adjusting fuel injection systems, oil and water pumps, generators, governors, auxiliary and accompanying power units, controls, and transmissions, using a variety of tools and testing and diagnostic equipment.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student is expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code, and complete a shop safety inspection. 1.1 Accurately match terms associated with shop to the correct definitions. 1.2 Accurately match the colors of the safety color code to the correct applications. 1.3 List personal safety rules. 1.4 List general shop safety rules. 1.5 Match possible sources of accidents to the injury which may occur. 1.6 Demonstrate or identify the proper procedure should an accident occur. 1.7 Complete a shop inspection identifying unsafe situations and equipment.

2. Selection and maintenance of tools.	2. Identify and select the proper tools for the job and maintain them in a safe condition. 2.1 Identify hand tools and their purpose. 2.2 Identify power tools and explain their operation. 2.3 Select the proper tool for the job, demonstrate the proper use, and identify safety precautions. 2.4 Explain and demonstrate how to properly maintain the tools.
3. Diesel and gasoline engines.	3. Explain the operation of the diesel engine, distinguish between the differences in the diesel engine and the gasoline engine, and explain the basic difference between a four stroke cycle and a two stroke cycle engine. 3.1 Match engine operating principles to the correct definitions. 3.2 Identify basic parts of a diesel engine. 3.3 Match basic diesel engine parts to their functions. 3.4 Explain the operation of the diesel engine. 3.5 Explain the basic difference between two stroke and four stroke engines. 3.6 Explain the characteristics of two-cycle and four-cycle engines

	3.7 Explain the differences in diesel engines and gasoline engines.
4. Maintenance procedures.	4. Service and perform maintenance procedures on diesel vehicles.
	4.1 Explain the importance of and set up a maintenance schedule.
	4.2 Service and perform maintenance, using correct procedures, on a commercial and a private vehicle.
	4.3 Service and perform maintenance, using correct procedures, on a typical diesel engine.
	4.4 Service and perform maintenance, using correct procedures, on the supporting systems of a diesel engine.
5. Soldering and welding.	5 Demonstrate the basic skills in organizing, soldering, cutting and welding.
	5.1 Using proper rod and arc, weld adjustments, make the basic welds in the horizontal and vertical positions.
	5.2 Set up the oxyacetylene equipment for welding operation.
	5.3 Cut various thicknesses of flat and round stock.

	5.4 Braze weld a square groove butt joint. 5.5 Solder wire connections. 5.6 Choose the correct soldering tool for the job. 5.7 Solder holes or cuts in thin metal.
6. Cooling systems.	6. Demonstrate skills in testing and correcting malfunctions within the cooling system. 6.1 Identify components of the cooling system. 6.2 Disassemble, inspect, clean, and reassemble a cooling system. 6.3 Recognize and diagnose at least four problems in a malfunctioning cooling system through logical testing procedures. 6.4 Correct a malfunctioning cooling system.
7. Electrical systems.	7. Demonstrate skills in testing and correcting malfunctions within the electrical systems. 7.1 Identify components of the electrical system. 7.2 Disassemble, inspect, clean, and reassemble an electrical system.

	7.3 Recognize and diagnose problems in a malfunctioning electrical system through logical testing procedures.
	7.4 Correct a malfunctioning electrical system.
8. Fuel injection systems.	8. Demonstrate skills in testing and correcting malfunctions within the fuel injection system.
	8.1 Identify components of the fuel injection system.
	8.2 Disassemble, inspect, clean, and reassemble a fuel injection system.
	8.3 Recognize and diagnose problems in a malfunctioning fuel injection system through logical testing procedures.
	8.4 Correct a malfunctioning fuel injection system.
9. Hydraulic brakes.	9. Recondition hydraulic brakes.
	9.1 Identify components of hydraulic brakes.
	9.2 Recognize and diagnose a worn or defective braking system.
	9.3 Disassemble, inspect, clean, and reassemble a hydraulic brake system.

	9.4 Rebuild or replace hydraulic brakes.
	9.5 Adjust hydraulic brakes.
10. Air brakes.	10. Recondition air brakes.
	10.1 Identify components of air brakes.
	10.2 Recognize and diagnose worn or defective air braking system.
	10.3 Disassemble, inspect, clean, and reassemble an air brake system.
	10.4 Rebuild or replace air brakes.
	10.5 Adjust air brakes.
11. Rebuild engines.	11. Remove, rebuild and replace to manufacturer's specifications, any part of an engine.
	11.1 Completely disassemble an engine.
	11.2 Clean and measure all parts and check for serviceability.
	11.3 Remove and repair or replace liners.

Rebuild engines cont'd.

11.4 Check, disassemble and assemble rod and piston assemblies.

11.5 Replace engine bearings.

11.6 Replace engine seals.

11.7 Check block for defects.

11.8 Check ring gap and side play.

11.9 Assemble engine to manufacturer's specifications.

11.10 Time engines.

11.11 Disassemble, check and repair head.

11.12 Perform basic carbon and valve job.

11.13 Repair or replace valve guides.

11.14 Repair or replace valve seats.

11.15 Replace cylinder head.

11.16 Adjust valves.

11.17 Adjust injectors.

12. Drive trains.	12. Recondition a drive train. 12.1 Identify components of a drive train. 12.2 Recognize and diagnose a worn or defective drive train. 12.3 Disassemble, inspect, clean, and reassemble a drive train. 12.4 Rebuild or replace a drive train. 12.5 Adjust drive train.
13. Diesel engines.	13. Tune up a diesel engine. 13.1 Identify the component of a diesel engine. 13.2 Recognize and diagnose problems in a poorly tuned engine. 13.3 Tune up a diesel engine to manufacturer's specifications.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.	5.1 Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality. c. Honesty. d. Cooperation. e. Cleanliness of self and work place. f. Productivity. g. Communication. h. Completion of tasks. i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations. 1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
47.0606 Small Engine Repair

47.0606 Small Engine Repair -- an instructional program that prepares individuals to maintain and repair small internal-combustion engines used on portable power equipment such as lawnmowers, chain saws, rotary tillers, motorcycles, and snowmobiles.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code; and complete a shop safety inspection.
	1.1 Match terms associated with shop safety to the correct definitions.
	1.2 Match the colors of the safety color code to the correct applications.
	1.3 List personal safety rules.
	1.4 List general shop safety rules.
	1.5 Match possible sources of accidents to the injury which may occur.
	1.6 Match the correct fire extinguisher to the proper fire.
	1.7 Complete a shop inspection identifying unsafe situations and equipment.

2. Tool Selection and Maintenance.	2. Identify and select the proper tools for the job and maintain them in a safe condition; identify the proper fastener with the correct tool; distinguish between S.A.E., U.S.S., and metric fasteners, including correct size; and identify the proper procedure for repairing fasteners.
	2.1 Identify hand tools and their purpose.
	2.2 Identify power tools and explain their operation.
	2.3 Select the proper tool for a job, demonstrate the proper use, and identify safety precautions.
	2.4 Explain and demonstrate how to properly maintain tools.
	2.5 Correctly identify fasteners to the size and application.
	2.6 Demonstrate the correct procedure for repairing damaged threads.
3. Engine operating parts and principles.	3. Identify basic parts to their functions; explain the operation of the engine, and explain the basic difference between a four stroke cycle and a two stroke cycle engine.
	3.1 Match engine operating principles to the correct definitions.
	3.2 Identify basic parts of an internal combustion engine.

	3.3 Match basic engine parts to their functions.
	3.4 Explain the operation of the internal combustion engine.
	3.5 Explain the basic difference between two stroke and four stroke engines.
	3.6 Explain the characteristics of two-cycle and four-cycle engines.
4. Servicing internal combustion engines.	4. Service and perform maintenance procedures on an internal combustion engine.
	4.1 Explain the importance of and set up a maintenance schedule.
	4.2 Service and perform maintenance, using correct procedures, on an internal combustion engine.
	4.3 Service and perform maintenance, checking fluid level, v-belts, and adjustments to manufacturer's safety code.
	4.4 Service equipment accessories for proper' condition and safety.
	4.5 Demonstrate the ability to operate equipment in a safe and proper manner according to the applicable manual.

5. Cooling system malfunctions.

5. Demonstrate skills in testing and correcting malfunction within the cooling system, both air and water.

    5.1 Identify components of the cooling systems.

    5.2 Disassemble, inspect, clean, test and reassemble a cooling system to manufacturer's specifications.

    5.3 Recognize and diagnose problems in a malfunctioning cooling system through logical testing procedures.

    5.4 Correct a malfunctioning cooling system to manufacturer's specifications.

6. Testing and connecting malfunctions.

6. Demonstrate skills in testing and correcting malfunctions within the electrical system, including generators, alternators, starters, and batteries; demonstrate the ability to repair electrical systems using soldering techniques and mechanical connectors.

    6.1 Identify components of the electrical system.

    6.2 Disassemble, inspect, test, clean and reassemble a generator to manufacturer's specifications.

    6.3 Disassemble, inspect, test, clean and reassemble a alternator to manufacturer's specifications.

Testing and connecting malfunctions cont'd.	6.4 Disassemble, inspect, test, clean and reassemble a starter to manufacturer's specifications.
	6.5 Demonstrate the ability to correctly service a battery to manufacturer's specifications.
	6.6 Demonstrate the ability to correctly read a service manual wiring diagram.
	6.7 Recognize and diagnose problems in a malfunctioning electrical system through logical testing procedures.
	6.8 Correct a malfunctioning electrical system to manufacturer's specifications.
	6.9 Demonstrate the correct procedure for stripping, tinning, and soldering wires.
	6.10 Demonstrate the ability to select and install mechanical connectors.
7. Fuel system components.	7. Demonstrate skills in testing and correcting malfunctions within the fuel system; correctly distinguish the types of fuel systems used in small engines.
	7.1 Identify components of the fuel system.
	7.2 Disassemble, inspect, clean, test and reassemble a fuel system to manufacturer's specifications.

	7.3	Recognize and diagnose problems in a malfunctioning fuel system through logical testing procedures.
	7.4	Correct a malfunctioning fuel system to manufacturer's specifications.
	7.5	Distinguish the different types of fuel system forms.
8. Internal combustion engines.	8.	Tune up an internal combustion engine.
	8.1	Identify the tuneable components of an internal combustion engine.
	8.2	Recognize and diagnose problems in a poorly tuned engine.
	8.3	Using proper tools, procedures, and service manual, perform proper checks, tests, adjustments and minor repairs, to tune up an internal combustion engine to manufacturer's specifications.
9. Using precision measuring tools.	9.	Demonstrate the ability to use precision measuring tools.
	9.1	Demonstrate the proper use of a micrometer.
	9.2	Demonstrate the proper use of vernier calipers.
	9.3	Demonstrate the proper use of a dial indicator.

10. Servicing ignition systems.	10. Demonstrate the ability to service both a self-contained magneto and a single or multi-cylinder battery ignition system. 10.1 Demonstrate the ability to remove and replace ignition points and condenser to manufacturer's specifications. 10.2 Remove, repair, test and install a distributor and magneto to manufacturer's specifications. 10.3 Demonstrate the ability to static and strobscope time a distributor to an engine to manufacturer's specifications.
11. Governor system repair	11. Demonstrate the ability to adjust and repair a small engine governor system. 11.1 Demonstrate the ability to adjust the governor to manufacturer's specifications.
12. Oil changes.	12. Change oil filter with correct replacement filter to manufacturer's specifications. 12.1 Change oil filter with correct replacement to manufacturer's specifications. 12.2 Refill oil quantity to manufacturer's specifications. 12.3 Inspect for proper installation and usual leaks.

13. Gas welding equipment.	13. Set up. operate, and maintain gas welding equipment in a safe manner. 13.1 Assemble and disassemble gas welding equipment in a safe manner. 13.2 Clean welding and cutting tip on gas welding equipment. 13.3 Cut steel with gas equipment. 13.4 Perform soap and water leak test on gas welding equipment.
14. Arc welding equipment.	14. Set up and operate arc welding equipment in a safe manner. 14.1 Select proper leads and weld amperages. 14.2 Select proper electrods to match the metal and job. 14.3 Set up for tack welding. 14.4 Use the proper technique for maintaining.
15. Internal Combustion Engine.	15. Perform service on an internal combustion engine. This includes valve service to overhaul or replacement. 15.1 Perform valve service to manufacturer's specifications. 15.2 Overhaul or replace engine or internal parts to manufacturer's specifications.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to:
	a. Wages, salaries and benefits.
	b. Skills needed on the job.
	c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in:
	a. Finding a job.
	b. Applying and interviewing for a job.
	c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in:
	a. Company's purpose, policies and product.
	b. Duties performed in related jobs.
	c. Labor and professional organizations.
	d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.	5.1 Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality. c. Honesty. d. Cooperation. e. Cleanliness of self and work place. f. Productivity. g. Communication. h. Completion of tasks. i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
48.0101 Drafting

48.0101 Drafting -- an instructional program that generally prepares individuals to plan, prepare, and interpret mechanical, architectural, structural, pneumatic, marine, electric/electronic, topographical and other sketches; to use reproduction materials, equipment, and processes, to develop, plan, and process charts and drawings; to develop models; and to prepare reports and data sheets for writing specifications.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations, list general area and personal safety rules and demonstrate correct fire extinguisher uses in case of fire.
	1.1 Accurately match terms associated with area safety to the correct definitions.
	1.2 List general work area rules.
	1.3 List area safety rules.
	1.4. Demonstrate or identify the proper procedures should an accident occur.
2. Multi-view orthographic projection.	2. Demonstrate the processof multi-view orthographic projection and the selection of views in accordance with A.N.S.I.Y14.3 Standards.
	2.1 Select the necessary views for an orthographic drawing, as well as the minimum number of views necessary.
	2.2 Center the views on the work space, allowing room for dimensions and notes.
	2.3 Project from a given view to develop a missing view.

	2.4 Project lines which coincide properly.
	2.5 Project hidden edge lines properly.
3. Basic sketching techniques.	3. Sketch basic given objects using basic techniques and acceptable line weight, and format as judged acceptable by instructor, and in accordance with A.N.S.I.Y14.2 Standards.
	3.1 Sketch objects on paper using object, hidden edge, center dimension, extension, section, cutting-plane, and phantom lines.
	3.2 Sketch objects with a good sense of proportion and scale.
4. Selecting and maintaining equipment.	4. Identify and use the proper instruments for the drawing required, and maintain those instruments in proper working order.
	4.1 Identify instruments and explain their purpose.
	4.2 Select and use lead grades and drafting pencils.
	4.3 Select and identify drawing media as to type, grade, and size.
	4.4 Care for the drawing board cover.
	4.5 Draw lines with T-square, parallel, drafting machine and triangles.

Selecting and maintaining equipment cont'd.

4.6 Select and use a general purpose mechanical drawing scale.

4.7 Set and use a compass.

4.8 Demonstrate the proper use of a French curve.

4.9 Demonstrate the proper use of a protractor.

4.10 Demonstrate the proper use of templates.

4.11 Set up a diazo machine and obtain a good quality diazo copy.

4.12 Set up and use a lettering guide to do guide lines.

4.13 Square up and fasten a drawing to the drawing surface with drafting tape.

4.14 List the major parts of and describe the function of a computer-aided drafting system.

4.15 Erase unwanted lines, symbols or lettering.

5. Lettering.

5. Letter using single stroke vertical Gothic lettering in accordance with A.N.S.I. & 14.3 Standards.

5.1 Letter vertical capital letters and numbers.

5.2 Proportion Gothic letters and numbers.

	5.3 Space letters and numbers.
	5.4 Size letters and numbers.
6. Drafting mechanics.	6. Perform drafting mechanics according to industry standards.
	6.1 Bisect lines, arcs, and angles.
	6.2 Construct parallel lines.
	6.3 Construct perpendicular lines.
	6.4 Increase or decrease line length proportionally.
	6.5 Divide a line segment into a given number of parts.
	6.6 Reconstruct given angles in new positions.
	6.7 Lay out a given triangle.
	6.8 Construct a line tangent to a given circle at a given point.
	6.9 Find the center of a circle or arc.
	6.10 Construct a circle through three given points.
	6.11 Construct arcs tangent to given arcs and straight lines.

Drafting mechanics cont'd.

6.12 Construct arcs tangent to other arcs.

6.13 Construct hexagons of given size across the flats or points.

6.14 Construct octagons.

6.15 Draw an approximate ellipse using the 4 center method.

6.16 Develop a good level of line weight and technique.

7. Dimensioning and tolerancing.

7. Dimension the object in accordance with A.N.S.I. Y14.5 Standards on dimensioning and tolerancing.

7.1 List rules concerning the use of extension, dimension and center lines, as well as the use of the leader.

7.2 Explain the difference between aligned and unidirection system of dimensioning.

7.3 Become aware of the use of finish marks.

7.4 Dimension linear distance.

7.5 Dimension angular distance.

7.6 Dimension arcs and radii.

7.7 Dimension circles and holes.

7.8 Dimension solid geometric shapes.

Dimensioning and tolerancing cont'd.

7.9 Dimension by geometric breakdown for size and location.

7.10 Dimension feature location about a common center.

7.11 Dimension contours and curves.

7.12 Dimension with local and general notes.

7.13 Dimension with fractions, decimals, and metric system.

7.14 Identify the basics of limit dimensioning as it applies to tolerancing.

7.15 Dimension problems where change of scale is required.

7.16 Dimension machine or manufacturing operations which might be required for part production.

7.17 Explain the difference between dimensioning by rectangular, polar, or tabular coordinate systems.

7.18 Draw and fill in schedule and material lists.

7.19 Draw arrow heads properly.

8. Section views.	8. Develop the required section views of an object in accordance with standards found in A.N.S.I. Y14.2. 8.1 Draw a full section of a part. 8.2 Draw a half section of a part. 8.3 Draw a broken-out section of a part. 8.4 Draw revolved or removed sections. 8.5 Draw offset sections. 8.6 Draw sectioned assembly drawings. 8.7 Construct and use conventional breaks. 8.8 Draw and project revolved features. 8.9 Draw half views.
9. Auxiliary views.	9. Develop the required auxiliary views of an object in accordance with standards found in A.N.S.I. Y14.3. 9.1 Show the projections of auxiliary views. 9.2 List the different locations of a reference line. 9.3 Determine true line length.

Auxiliary views cont'd.

9.4 Construct true angle in auxiliary views.

9.5 Construct plotted curves.

9.6 Draw a complete primary auxiliary view of a given object.

9.7 Draw a complete secondary auxiliary view of a given object.

10. Pictorial drawings.

10. Describe and execute the major types of pictorial drawings in accordance with the A.N.S.I. Y14.4. Standards.

10.1 Draw and dimension:

- a. Isometric type drawing.
- b. Oblique type drawing.
- c. Exploded assembly drawings.

10.2 Describe the process of revolution as it would be used in computer aided drafting.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

- a. Punctuality.
- b. Confidentiality.
- c. Honesty.
- d. Cooperation.
- e. Cleanliness of self and work place.
- f. Productivity.
- g. Communication.
- h. Completion of tasks.
- i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
48.0201 Graphic and Printing Communications, General

48.0201 Graphic and Printing Communications, General -- an instructional program that generally prepares individuals in the approaches and techniques used in the various graphic and printing communications specialties.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code, and complete a shop safety inspection. 1.1 Match terms associated with shop safety to the correct definitions. 1.2 Match the colors of the safety color code to the correct applications. 1.3 List personal safety rules. 1.4 List general shop safety rules. 1.5 Match possible sources of accidents to the injury which may occur. 1.6 Identify the proper procedure should an accident occur. 1.7 Complete a shop inspection identifying unsafe situations and equipment.

2. Selection and maintenance of graphic art tools.	2.	Identify and select the proper tools for the job and maintain them in a safe condition.
	2.1	Identify hand tools and their purposes.
	2.2	Identify power tools and explain their operations.
	2.3	Select the proper tool for the job, demonstrate the proper use, and identify safety precautions.
	2.4	Explain and demonstrate how to properly maintain the tool.
3. Preparing copy.	3.	Prepare a copy.
	3.1	Read a ruler.
	3.2	Accomplish measurements within acceptable tolerances.
	3.3	Transpose standard measurements (inches) to printing measures (points, picas).
	3.4	Scale and mark art for camera.
	3.5	Detect flaws in type proofs, photostats, and photographs and make corrections.
	3.6	Execute a layout when given copy, art, intent, and mechanical requirements.
	3.7	Wax or rubber cement type proofs and photostats.

Preparing copy cont'd.	3.8 Rule out bleed, trim, fold and other key or holding lines. 3.9 Cut type proofs and photostats and paste up. 3.10 Execute solid shapes by inking or in cutting Rubylith overlay. 3.11 Develop layout when given a client's idea. 3.12 Identify category and conventional usage of typefaces, rules, borders, rules, etc. 3.13 Lay out and execute mechanics for work involving solids and tints (overlaid and butted), dropouts, reverses, combined tints, and similar operations. 3.14 Use and/or maintain: Line gage, film cutter, shears, brushes, inks, pens, drafting set, T-square, steel straight edge, triangles, curves, Rubylith, Amberlith, acetate, drawing board, drawing, table, airbrush and compressor, typewriter, paper cutter, and photostat camera.
4. Composition operations.	4. Perform composition operations. 4.1 Produce a preliminary layout and select type. 4.2 Set up and operate cold typesetting equipment.

Composition operations cont'd.	4.3 Set justified copy.
	4.4 Recognize and set repro quality work.
	4.5 Make corrections.
	4.6 Explain operating principles of common manually operated cold typesetting equipment.
	4.7 Read and use proofreading symbols.
	4.8 Analyze and apply type and space requirements.
	4.9 Calculate for copyfitting.
	4.10 Specify type style and leading.
	4.11 Organize work for production efficiency.
	4.12 Estimate typesetting and copy preparation time.
	4.13 Initiate copymarking for keyboarding.
	4.14 Perform all keyboarding functions.
	4.15 Set up and operate typesetting machine.
5. Offset camera operations.	5. Operate the offset camera.
	5.1 Demonstrate skill in offset camera work:

Offset camera operations cont'd.

a. Determine proper exposure for various lighting and film speeds.

b. Determine proper composition in a desired photograph.

c. Produce suitable prints of proper contrast and density for use in graphic reproduction.

d. Produce line negatives from black and white copy on the process camera.

e. Determine the proper film to use for the type of copy to be photographed.

f. Select the proper filter to be used to photograph the desired colored copy.

g. Make posterized negatives of continuous copy.

h. Make contact positives from line negatives.

i. Make contact negatives using duplicating film.

j. Make negative butts and overlaps using auto positive film.

k. Make halftone negatives from continuous tone black and white photographs using the process camera.

Offset camera operations cont'd.

l. Make duotone negatives from continuous toneblack and white photographs using the process camera.

m. Make special effect negatives from continuous tone black and white photographs using special screens on the process camera.

5.2 Use and/or maintain: camera, film, darkroom, lights, processing chemicals, process camera, ortho, pan, duplicating and auto positive film, black and white line copy, coloredline copy, colored filters, black and white photographs, halftone screen, contact frame and register punch, vacuum frame, masking film and matching chemicals, color compensating film, and matching chemicals, color compensating filters, color separation filters, re-angled screens, diffusion sheets, and inspection glass.

6. Stripping and plating operations.

6. Perform stripping and plating operation.

6.1 Demonstrate skill in stripping and plating:

a. Rule out flats for black and white printed forms.

b. Strip both line and halftone negatives into flats.

c. Strip work and turn forms.

Stripping and plating operations cont'd.	d. Strip tumble-head forms. e. Strip butted negatives. f. Opaque negatives. g. Scribe line forms on negatives. h. Strip sets of color negatives in register. i. Determine proper exposure time for any offset plate. j. Expose and process positive working offset plates. k. Prepare, expose, and process rub-on type offset plates. l. Finish and preserve all types of offset plates. m. Use and/or maintain: scotch tape, goldenrod masking paper, plate burner, rub-on table, exposure guide, gum arabic;
7. The offset camera.	7. Operate the offset camera. 7.1. Demonstate skill in using the offset camera. a. Pull reproduction proofs from type-high forms on the proof press.

The offset camera cont'd.

b. Make salt prints, brown prints, or Vandyke proofs.

c. Make high contract reproduction proofs from photograph paper.

d. Make positive process reproduction proofs to size.

e. Make dry proofs using the heat process.

f. Set up and operate feeder of duplicator for full range of stocks.

g. Mount plate and obtain lay.

h. Print a range of stock in black/white to commercial standards using duplicator.

i. Print two color work on duplicator.

7.2 Organize work schedule for production efficiency.

7.3 Maintain operating log for downtime utilization.

7.4 Set up and operate offset press through complete range of stock.

7.5 Print black/white work to all commercial standards of color, register, speed and waste on offset press.

7.6 Use and/or maintain: Positive processor, high contrast photographic proof paper and developer, duplicator, single color press and multi-color press.

8. Binding operations.

8. Perform binding operations.

8.1 Demonstrate skill in binding:

a. Figure stock cuts.

b. Select specified stocks.

c. Plan cut sequence.

d. Organize materials flow.

e. Split gages.

f. Change and adjust blades.

g. Set up and operate folder for: letter fold to 32 pages; accordion folds to 32 pages; right angle folds to 32 pages; parallel folds to 32 pages; oblong folds to 32 pages; splitting; perforating; scoring; gluing; continuous feed operation.

8.2 Set up stitching machine for a specific job.

a. Accomplish desired stitching operation.

b. Assemble sheets in numercial sequence.

c. Gather signature to place them in the proper order.

8.3 Use and/ or maintain: guillotine cutter, buckle type folder, hand-operated stitcher, foot-operated stitcher, automatic stitchers, collating machine.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to:
	a. Wages, salaries and benefits.
	b. Skills needed on the job.
	c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in:
	a. Finding a job.
	b. Applying and interviewing for a job.
	c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in:
	a. Company's purpose, policies and product.
	b. Duties performed in related jobs.
	c. Labor and professional organizations.
	d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.	5.1 Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality. c. Honesty. d. Cooperation. e. Cleanliness of self and work place. f. Productivity. g. Communication. h. Completion of tasks. i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
48.0203 Commercial Art

48.0203 Commercial Art -- an instructional program that prepares individuals to design and execute lay outs and make illustrations for advertising displays and instructional manuals. Includes instruction in the preparation of copy; lettering, poster, package, and product design; fashion illustration; silk screening; air brushing; and inks and color dynamics.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Safety procedures - tools and equipment.	1. Implement safety procedures with tools and equipment.
	1.1 Operate dry mount press and tacking iron in a safe manner.
	1.2 Cut with paper cutter, scissors, and x-acto knife in safe manner.
	1.3 Operate sign press in safe manner.
2. Safety procedures - materials.	2. Implement safety procedures with materials.
	2.1 Use solvents in safe manner.
	2.2 Spray aerosols in safe manner.
	2.3 Handle combustibles in safe manner.
	2.4 Mix chemicals in safe manner.
3. Personal safety procedures.	3. Implement personal safety procedures.
	3.1 Identify fire procedures.

Personal safety procedures cont'd.	3.2 Demonstrate safe dress practices.
	3.3 Idendify safe personal hygiene measures.
	3.4 Practice safe lifting and carrying.
	3.5 Practice safe loading and storage.
	3.6 Practice safe housekeeping procedures.
	3.7 Regulate work habits to darkroom lighting requirements.
	3.8 Demonstrate individual safe conduct and attitudes in classroom.
	3.9 Practice safe climbing procedures.
	3.10 Maintain clean working area.
	3.11 Identify the proper procedures should an accident occur.
4. Cleaning tools and equipment.	4. Clean tools and equipments.
	4.1 Clean brushes correctly.
	4.2 Clean inking pens correctly.
	4.3 Clean and maintain air brush properly.
	4.4 Clean T-square and triangle.
	4.5 Clean drawing board.

5. Maintaining tools and equipment.	5.	Maintain tools and equipment.
	5.1	Maintain dry mount press.
	5.2	Maintain Goodkin Lucey.
	5.3	Maintain sinks.
6. Adhering copy.	6.	Adhere copy.
	6.1	Adhere copy with one coat cement.
	6.2	Adhere copy with two coat cement using wet copy on cement free surface.
	6.3	Adhere copy with two coat cement using wet copy with dry board.
	6.4	Adhere copy with two coat cement using dry copy on dry board.
	6.5	Adhere copy with two coat cement with slip sheet method.
	6.6	Remove cemented copy from board surface using rubber cement thinner.
	6.7	Adhere copy with wet mounting process (using Elmer's Glue).
	6.8	Operate and adhere using the hot wax applicator.

7. Mounting copy.	7. Mount copy. 7.1 Operate the dry mounting press. 7.2 Operate the tacking iron. 7.3 Adhere copy with permanent dry mounting tissue. 7.4 Adhere copy with removable dry mounting tissue. 7.5 Mount a photo with permanent dry mounting tissue using normal photographic paper. 7.6 Mount a photo with permanent dry mounting tissue using R.C. photographic paper.
8. Measuring copy.	8. Measure copy. 8.1 Measure various newspaper and dimensions in agate line depths. 8.2 Measure various type area dimensions in picas. 8.3 Measure various type area depths in points. 8.4 Measure various ad dimensions with 1/32" incremented ruler. 8.5 Measure projects with metric ruler.

9. Scaling copy.	9. Scale copy. 9.1 Scale copy with diagonal line method. 9.2 Scale copy with proportional wheel. 9.3 Draw copy to scale with grid method.
10. Sketching skills.	10. Demonstrate sketching skills within two time frames: i.e. 30 seconds and 5 minutes with various mediums. 10.1 Quick sketch the human head, heads, feet and entire torso. 10.2 Quick sketch animals. 10.3 Quick sketch landscape, both urban and rural.
11. Advertising layout.	11. Lay out ads. 11.1 Lay out individual ad components; headlines, body, copy main illustration or photo.
12. Lettering skills.	12. Demonstrate lettering skills according to job entry level standards. 12.1 Accurately form the following lettering styles using pencil, pen and brush: Roman, Gothic, Script, Text and Designed.

13. Body copy-measuring and positioning.	13. Measure and position body copy. 13.1 Measure character counting from manuscript. 13.2 Calculate space type to occupy type specimen sheet. 13.3 Measure space type to occupy with Haberule. 13.4 Mark copy for typesetter.
14. Layout design.	14. Design a layout using the Standard Procedures. 14.1 Design thumbnail sketches. 14.2 Design full size rough. 14.3 Design refined comprehensive (comp.). 14.4 Design camera ready mechanical.
15. Camera operation.	15. Operate a 35 mm. camera. 15.1 Operate the controls of a 35 mm. camera. 15.2 Change lenses on a 35 mm. camera. 15.3 Load and unload film in a 35 mm. camera. 15.4 Take a light reading using lens metering and a hand held meter. 15.5 Determine depth of field using preview button. 15.6 Clean a 35 mm. lens correctly.

16. Camera shots.	16. Shoot exposures with 35 mm. camera.
	16.1 Select correct film for photo project.
	16.2 Set up 3-point lighting.
	16.3 Shoot a series of B & W product shots in studio using 35 mm. camera.
17. Film processing.	17. Process film.
	17.1 Prepare chemistry for B & W film processing.
	17.2 Load film on to reel and place in developing tank.
	17.3 Process and dry a roll of 35 mm. camera.
	17.4 Cut dry processed film and insert in glassiness.
18. Contact prints.	18. Make contact prints.
	18.1 Prepare chemistry for print processing.
	18.2 Expose, process and dry a set of contacts.
19. Prints.	19. Make prints.
	19.1 Select negative from contact sheet for enlargement.
	19.2 Make an exposure test strip,

	19.3 Expose, develop and dry print.
20. Retouching.	20. Retouch prints. 20.1 Clean up print by spotting with retouch grays.
21. Color and color mixing.	21. Demonstrate knowledge of color and color mixing. 21.1 Lay out and paint a 12 hue color wheel and understand its terms. 21.2 Lay out and paint a 9 step scale of tints and shades.
22. Perspective.	22. Draw in perspective. 22.1 Draw a 1-point perspective. 22.2 Draw a 2-point perspective.
23. Photostats.	23. Operate a photostat camera. 23.1 Shoot a negative photostat to scale. 23.2 Shoot a positive photostat to scale.
24. TV storyboards.	24. Sketch TV storyboards. 24.1 Sketch TV storyboard. 24.2 Refine full size, TV storyboard for ice cream to complete finish.

25. Commercial art techniques.	25. Demonstrate knowledge of Commercial Art techniques and layout and design. 25.1 Create a series of design pieces for the promotion of client's product, i.e., logos, business forms, ads, and brochures.
26. Portfolios.	26. Prepare portfolios. 26.1 Assemble a portfolio of finished products.
27. Resumes.	27. Write resumes. 27.1 Write a resume, including experience competitions, exhibitions and printed projects.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to:
	a. Wages, salaries and benefits.
	b. Skills needed on the job.
	c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in:
	a. Finding a job.
	b. Applying and interviewing for a job.
	c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in:
	a. Company's purpose, policies and product.
	b. Duties performed in related jobs.
	c. Labor and professional organizations.
	d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.	5.1 Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality. c. Honesty. d. Cooperation. e. Cleanliness of self and work place. f. Productivity. g. Communication. h. Completion of tasks. i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
48.0503 Machine Tool Operation/Machine Shop

48.0503 Machine Tool Operation/Machine Shop -- an instructional program that prepares individuals to shape metal parts on machines such as lathes, grinders, drill presses, milling machines, and shapers. Programs may also train individuals in the use of one machine tool. Includes instruction in making computations related to work dimensions, testing feeds and speeds of machines using precision measuring instruments such as lay out tools, micormeters, and gauges; machining and heat-treating various metals; and in laying out machine parts.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code, and complete a shop safety inspection.
	1.1 Accurately match terms associated with shop safety to the correct definitions.
	1.2 List personal safety rules.
	1.3 List general shop safety rules.
	1.4 Match possible sources of accidents to the injury which may occur.
	1.5 Demonstrate or identify the proper procedures should an accident occur.
	1.6 Complete a shop inspection identifying unsafe situations and equipment.

2. Selection and maintenance of tools.

2. Identify and select the proper tools for the job and maintain them in a safe condition.
    - 2.1 Manage tool crib and steel storage.
    - 2.2 Identify hand tools and their purpose.
    - 2.3 Identify power tools and explain their operation.
    - 2.4 Given a basic task, select the proper tool for the job, demonstrate the proper use, and identify safety precautions.
    - 2.5 Given a hand tool or power tool, explain and demonstrate how to properly maintain the tools.

3. Machine shop skills and knowledge.

3. Demonstrate general machine shop skills and knowledge.
    - 3.1 Select and use measuring devices applying basic mathematics.
    - 3.2 Read and interpret handbooks and sketches.

4. Machine set-up operations.

4. Perform machine set-up operations.
    - 4.1 Read blueprints, make simple sketches, specs; select tools from tool crib.
    - 4.2 Measure, mark and scribe dimensions and reference points to lay out stock for machine.

4.3 Inspect machine and verify correct pre-start condition.

4.4 Start machine and verify correct running condition.

4.5 Operate bench grinder and sharpen tools.

5. Metal-working machine operations.

5. Perform metal-working machine operations.

5.1 Calculate and set up drill press.

5.2 Operate single and radial drill press.

5.3 Perform drilling, reaming, etc. operations with drill press and lathe.

5.4 Set up and operate bench and engine lathe.

5.5 Perform machine operation and techniques with lathe.

5.6 Machine parts to specifications and verify using measuring instruments.

5.7 Finish and polish lathe work.

5.8 Operate vertical, horizontal and/or universal milling machine.

5.9 Perform milling operation and techniques.

5.10 Select, set up, and use milling machine, dividing head and rotary table.

Metal-working machine operations cont'd.

5.11 Mill slots and grooves.

5.12 Perform parting and cutting operation and techniques.

5.13 Perform various sawing, filing and polishing operation and techniques.

5.14 Inspect, dress and true grinding wheels.

5.15 Perform internal, external, and surface grinding operations.

5.16 Remove burrs and wire edges using abrasive stones.

5.17 Perform honing and lapping operations and techniques.

5.18 Develop specifications from general description and draw product.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

a. Punctuality.

b. Confidentiality.

c. Honesty.

d. Cooperation.

e. Cleanliness of self and work place.

f. Productivity.

g. Communication.

h. Completion of tasks.

i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
48.0506 Sheet Metal

48.0506 **Sheet Metal** -- an instructional program that prepares individuals to lay out, fabricate, erect or install, and maintain items made of steel, copper, stainless steel, and aluminum using hand tools and machines such as cornice brakes, forming rolls, and squaring shears.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code, and complete a shop safety inspection.
	1.1 Accurately match terms associated with shop safety to the correct definitions.
	1.2 Accurately match the colors of the safety color code to the correct applications.
	1.3 List personal safety rules.
	1.4 List general shop safety rules.
	1.5 Match possible sources of accidents to the injury which may occur.
	1.6 Complete a shop inspection identifying unsafe situations and equipment.

2. Proper tools.	2. Identify and select the proper tools for the job and maintain them in a safe condition. 2.1 Identify hand tools and their purposes. 2.2 Identify power tools and explain their operations. 2.3 Given a basic task, select the proper tools for the job, demonstrate the proper use, and identify safety precautions. 2.4 Given a hand tool or power tool, explain and demonstrate how to properly maintain the tools.
3. Layouts.	3. Perform layout of parralleled lines, radial line development, and triangulation. 3.1 Identify lines, symbols and dimensions. 3.2 Lay out parallel lines for fittings. 3.3 Lay out radial lines for fittings. 3.4 Lay out triangulation lines for fittings.
4. Equipment operation and maintenance.	4. Maintain and operate equipment. 4.1 Maintain and operate drill press. 4.2 Maintain and operate power hacksaw. 4.3 Maintain and operate hand brake.

5. Duct and fitting installation.

4.4 Maintain and operate power brake.

4.5 Maintain and operate slip roll.

4.6 Maintain and operate power shear.

4.7 Maintain and operate beader-crimper.

4.8 Maintain and opeprate unishears.

4.9 Maintain and operate edging machine.

4.10 Maintain and operate power press.

4.11 Maintain and operate spot welder.

5. Fabricate, erect, and install duct and fittings.

5.1 Lay out ducts and fittings.

5.2 Set ducts and fittings.

5.3 Form ducts and fittings.

5.4 .Fasten ducts and fittings using:

a. screws.

b. bolts.

c. rivets.

d.. pop rivets.

e. common locks.

6. Employability outlook.	6.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
7. Employability process.	7.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
8. Job related information.	8.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
9. Personal financial management.	9.1 Compute wages and payroll deductions.
10. Interpersonal relations.	10.1 Demonstrate appropriate behavior in: a. Punctuality. b. Confidentiality.

		c. Honesty.
		d. Cooperation.
		e. Cleanliness of self and work place.
		f. Productivity.
		g. Communication.
		h. Completion of tasks.
		i. Positive attitudes and enthusiasm toward the job.
11. Vocational student organization membership.	11.1	Identify the advantages of participating in vocational student organizations.
	11.2	Participate as a member of a vocational student organization.
12. Development of leadership skills through VSO and related activities.	12.1	Demonstrate leadership development in:
		a. Social and interpersonal skills.
		b. Oral and written communication.
		c. Organization and mangement skills.
		d. Civic responsibilities.
		e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
48.0508 Welding, Brazing, and Soldering

48.0508 Welding, Brazing, and Soldering -- an instructional program that prepares individuals to uses gases and/or welding processes and to braze and solder metal parts according to diagrams, blueprints, or written specifications.

Program Objective	Standard of Student Expectation
The progrm will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations; list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire and complete shop safety inspection.
	1.1 Match terms associated with shop safety to correct applications.
	1.2 List personal safety rules.
	1.3 List general shop safety rules.
	1.4 Match possible sources of accidents to the injury which may occur.
	1.5 Demonstrate or identify the proper procedures should an accident occur.
	1.6 Complete a shop inspection identifying unsafe situations and equipment.
2. Selection and maintenance of tools.	2. Select the proper tools for the job and demonstrate safely the use of such tools.
	2.1 Given a basic task, select the proper tool for the job, demonstrate the proper use, and identify safety precautions.

	2.2	Given a hand tool or power tool, explain and demonstrate how to properly maintain the tools.
	2.3	Cut materials with hand hacksaw.
	2.4	Drill holes using power drill press.
	2.5	Grind with power equipment.
	2.6	Rough and finish metal surfaces with hand tools.
	2.7	Use of measurement and layout tools.
3. Shielded-metal-arc welding (S.M.A.W.); Gas-metal-arc-welding (G.M.A.W.); and Gas-tungsten-arc-welding (G.T.A.W.)	3.	Set up properly for arc welding.
	3.1	Select proper amperage for size electrode being used.
	3.2	Select polarity in accordance with electrode being used.
	3.3	Demonstrate proper grounding.
	3.4	Demonstrate the ability to set up and operate different makes of welding machines.
	3.5	Demonstrate familiarity with mechanical characteristics associated with G.M.A.W. equipment.

4. Metal processing work.

4. Plan and set up metal processing work.

4.1 Select metals for processing from engineering specifications.

4.2 Set up for:

- a. Tack and seam welding (Arc-Gas).
- b. Oxyacetylene metal cutting.
- c. Tack open butt joint (Gas-Arc).
- d. Welding corner of edge joint (Arc-Gas).
- e. Welding in the flat position (Arc-Gas).
- f. Welding in the horizontal position (Arc-Gas).
- g. Welding in the overhead position (Arc-Gas).
- h. Welding in the vertical position (Arc-Gas).
- i. Welding lap joints (Arc-Gas).
- j. Welding tee joints (Arc-Gas).

4.3 Clamp metal work to prevent distortion.

4.4 Set up and arc weld multi-pass fillet weld.

5. Gas welding equipment.	5. Set up and operate gas welding equipment. 5.1 Assemble or disassemble oxyacetylene equipment. 5.2 Replace gas regulator on gas welding equipment. 5.3 Change oxygen or acetylene cylinders. 5.4 Clean welding and cutting tips on gas equipment.
6. Types and shapes of metals.	6. Identify different types and shapes of metals. 6.1 Identify different types of metals. 6.2 Identify structural shapes.
7. Skills in welding.	7. Demonstrate the ability to weld. 8.1 Weld: a. mild steel b. aluminum c. stainless steel
8. Structural welding and cutting operations.	8. Perform structural welding and cutting operations. 8.1 Fabricate metal work stands or fixtures. 8.2 Demonstrate ability to cut and fit various structural shapes.

The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to:
	a. Wages, salaries and benefits.
	b. Skills needed on the job.
	c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in:
	a. Finding a job.
	b. Applying and interviewing for a job.
	c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in:
	a. Company's purpose, policies and product.
	b. Duties performed in related jobs.
	c. Labor and professional organizations.
	d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

- **a. Punctuality.**
- **b. Confidentiality.**
- **c. Honesty.**
- **d. Cooperation.**
- **e. Cleanliness of self and work place.**
- **f. Productivity.**
- **g. Communication.**
- **h. Completion of tasks.**
- **i. Positive attitudes and enthusiasm toward the job.**

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
TRADE AND INDUSTRIAL EDUCATION
48.0703 Millwork and Cabinetmaking

48.0703 Millwork and Cabinetmaking -- an instructional program that prepares individuals to engage in the mass production of such articles as window frames, moldings, trim and panels; and such products as store fixtures, kitchen cabinets, and office equipment. Includes instruction in cutting, shaping, assembling, and refinishing articles; installing hinges, catches, drawer pulls, and other hardware; and planning and drafting layouts.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Shop safety.	1. Recognize unsafe situations, list general shop and personal safety rules; demonstrate correct fire extinguisher use in case of fire; recognize the uses of the safety color code, and complete a shop safety inspection. 1.1 Accurately match terms associated with shop safety to the correct definitions. 1.2 Accurately match the colors of the safety color code to the correct applications. 1.3 List personal safety rules. 1.4 List general shop safety rules. 1.5 Match possible sources of accidents to the injury which may occur. 1.6 Demonstrate or identify the proper procedure should an accident occur. 1.7 Complete a shop inspection identifying unsafe situations and equipment.

2. Selection and maintenance of tools.	2. Identify and select the proper tools for the job and maintain them in a safe condition.
	2.1 Identify hand tools and their purpose.
	2.2 Identify power tools and explain their operation.
	2.3 Select the proper tool for a job, demonstrate the proper use, and identify safety precautions.
	2.4 Explain and demonstrate how to properly maintain tools.
3. Millwork and cabinetmaking terminology.	3. Demonstrate knowledge of millwork and cabinetmaking terminology and plans.
	3.1 Define and use terminology in millwork.
	3.2 Read, understand and interpret building sketches.
4. Job materials and labor.	4. Estimate materials and supplies.
	4.1 Estimate materials required for a job.
	4.2 Estimate labor required for a job.
5. Woodworking equipment, maintenance and operation.	5. Maintain and operate woodworking equipment.
	5.1 Maintain and operate: a. handsaw. b. table saw.

Woodworking equipment, maintenance and operation cont'd.

- c. jigsaw.
- d. radial arm saw.
- e. planer/surfacer.
- f. jointer.
- g. shaper.
- h. drill press.
- i. lathe.
- j. stroke sander.
- k. drum sander.
- l. disc sander.

6. Cabinetmaking.

6. Finish cabinets.

   6.1 Prepare material for finishing.

   6.2 Apply finishes:

   - a. brush.
   - b. spray.
   - c. Rubbed.

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The program will provide instruction in:	The student will be expected to:
1. Employability outlook.	1.1 Identify sources related to: a. Wages, salaries and benefits. b. Skills needed on the job. c. Employment trends.
2. Employability process.	2.1 Demonstrate skills in: a. Finding a job. b. Applying and interviewing for a job. c. Maintaining a job.
3. Job related information.	3.1 Demonstrate knowledge in: a. Company's purpose, policies and product. b. Duties performed in related jobs. c. Labor and professional organizations. d. Job advancement.
4. Personal financial management.	4.1 Compute wages and payroll deductions.

Employment Outlook cont'd.

5. Interpersonal relations.

5.1 Demonstrate appropriate behavior in:

- a. Punctuality.
- b. Confidentiality.
- c. Honesty.
- d. Cooperation.
- e. Cleanliness of self and work place.
- f. Productivity.
- g. Communication.
- h. Completion of tasks.
- i. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

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Home Economics and Health Related Occupations

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CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
(CONSUMER AND HOMEMAKING EDUCATION)
20.0101 Comprehensive Consumer and Homemaking Education
Level I

20.0101 Comprehensive Consumer and Homemaking Home Economics -- an instructional program that prepares individuals for the occupation of homemaker. Includes instruction in all home economic subject matter areas concerned with the economics, social and cultural conditions, needs of individuals and families, and emphasizes the basic principles and interrelationships among these areas.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
A. Consumer education and resource management	
1. Decision making process.	1.1 Identify the steps in decision making.
	1.2 Analyze the relationship of decision making to consumer choices.
	1.3 Relate purchasing decision to wants, needs, goals and values.
	1.4 Analyze the relationship of values, goals, and standards to consumer choice.
	1.5 Classify and prioritize wants and needs.
	1.6 Identify sources of influences on personal consumer choices.
2. Management process.	2.1 Identify purposes of managment.
	2.2 Relate management to personal activities.

	2.3	Demonstrate use of management principles to organize personal activities.
	2.4	Identify types of resources available to the individual and the family.
	2.5	Demonstrate the principles of effective methods of using resources.
3. Consumerism.	3.1	Identify the principles and state examples of supply and demand.
	3.2	Analyze factors that influence shopping practices.
	3.3	State ways consumer information can be used to make purchasing decisions.
	3.4	Generate a rationale for comparison shopping.
	3.5	Demonstratre rules for smart shopping practices.
	3.6	Identify legal rights for the consumer.
	3.7	Identify responsibilities of the consumer.
	3.8	Identify fraudulent and deceptive practices.
	3.9	State the types and purposes of buying guides.
	3.10	Define and explain the purpose of contracts and warranties.

	3.11	State the defintions of consumer protection agencies.
	3.12	Identify purposes and services of consumer protection agencies.
4. Credit.	4.1	State the definition of consumer credit.
	4.2	Recognize credit as a resource that is purchased.
	4.3	Identify reasons for using credit.
5. Advertising.	5.1	Explain the role advertising plays in the free enterprise system.
	5.2	Identify the components of effective advertisements.
	5.3	Analyze the components of advertisement for "puffing".
B. Human development, family living and parenthood education.		
1. Self-understanding.	1.1	Define self-concept, personality and changes that occur throughout life.
	1.2	Describe methods by which a self-concept develops and can be modified.
	1.3	Analyze the importance and relationship of values and goals and needs and wants as they relate to an individual's attitudes, beliefs, and behavior.

	1.4	Identify characteristics that contribute to the uniqueness of individuals.
	1.5	Identify means of meeting basic human needs.
2. Personal decision-making.	2.1	Demonstrate the application of the decision making process as it pertains to specific situations confronting teenagers in today's world.
	2.2	Identify available resources relating to teenage concerns.
3. Communication and interpersonal relationships.	3.1	Explain the characteristics and functions of the family.
	3.2	Formulate a personal plan for acceptable teenage peer relationships.
	3.3	Identify roles within the peer group.
	3.4	Distinguish between different types of love.
	3.5	Explain the communication process.
	3.6	Identify methods, patterns and levels of communication.
	3.7	Demonstrate effective listening skills as they relate to the communication process.
4. Preparation for marriage .	4.1	Evaluate the role of dating and courtship toward meeting the developmental tasks of individuals.

	4.2	Examine the guidelines for meeting societal expectations during the dating process.
	4.3	Demonstrate the use of rules of appropriate dating behavior and customs.
5. Preparation for family living.	5.1	Discuss the stages in the family life cycle.
	5.2	State the characteristics and functions of each family life cycle stage.
	5.3	Analyze family lifestyles and generate a summary relating stages of the family to lifestyles, values and goals.
	5.4	Demonstrate the ability to cope with personal stress and crisis.
	5.5	Analyze the influence of sex bias and stereotyping on family roles.
6. Development and care of children.	6.1	Describe the principles of good prenatal care.
	6.2	Identify the stages of prenatal development and the critical nature of each.
	6.3	Describe the birth process.
	6.4	Generate a plan for infant care including meeting the physical, cognitive and social/emotional needs of the infant.
	6.5	Generate a general explanation of developmental growth patterns.

C. Housing, home furnishings and equipment.

1. Social-psychological aspects of housing.	1.1	Identify personal and family needs for housing.
	1.2	Identify psychological and social influences of housing and home furnishings upon the individual.
	1.3	Describe family adjustments when moving.
2. Consumer aspects of housing.	2.1	Identify and compare forms of available housing.
	2.2	Examine rights and responsbilities of the housing consumer.
	2.3	Explain the significance of resource conservation in the home.
	2.4	Relate energy to house design.
3. Furnishing and equipment.	3.1	Examine the criteria for selecting furnishings and equipment.
	3.2	Demonstrate the principles of room arrangement for attractiveness, efficiency and usability.

4. Aesthetics and the living environment.	4.1	Identify the use of elements and principles of design.
	4.2	List the steps in the development of good taste and explain the rationale for so doing.
	4.3	Identify relationships of aesthetics of the living environment to life style, personality and income level.
5. Care and maintenance of the home.	5.1	List factors involved in caring for a room.
	5.2	Identify and plan responsibilities of caring for a home.
	5.3	Explain the importance of sharing responsibilities of the home.
6. Housing trends and issues.	6.1	Interpret role played by government in recent housing related areas.
	6.2	Identify concerns regarding the environmental impact of housing developments.
	6.3	Identify impact of technology advances upon housing and the housing industry.

D. Food and nutrition.

1. Significance of food.	1.1	Identify social, psychological and physical factors that affect family food choices.
	1.2	State purposes and advantages of family meal time.
	1.3	Evaluate influences upon personal eating habits.
	1.4	Demonstrate appropriate social etiquette for home, school, and as a guest.
2. Consumer aspects of food and nutrition.	2.1	Identify and interpret information found on food labels.
	2.2	Compare unit costs when shopping for food.
	2.3	Explain effective shopping and marketing techniques.
	2.4	Evaluate advertising used by various types of food retailers.
	2.5	State advantages and disadvantages of generics, house brands, coupons and trading stamps.
	2.6	State factors affecting family food choices when shopping for food.

3. Nutrition.	3.1	State the reasons why the body needs food and the importance of a well balanced diet.
	3.2	Discuss the relationship of nutritional status to health and self-image.
	3.3	Evaluate and plan a personal diet according to nutritional guidelines.
	3.4	Identify major food sources and functions of essential nutrients.
	3.5	Classify food according to nutritive value.
	3.6	List factors that influence calorie needs and relate to weight control.
	3.7	Distinguish between food facts and food fallacies and explain the process to obtain reliable information.
	3.8	Identify current food fads and relate to dietary practices.
	3.9	Use basic food groups as a daily guide to plan meals and evaluate individual diets, including foods eaten away from home.
4. Meal management.	4.1	Demonstrate use of principles for meal and menu planning.
	4.2	Describe basic types of meal patterns.
	4.3	Identify efficient work habits.

4.4 Plan a time schedule for preparing a meal.

4.5 Compare time and cost factor for convenience foods, fast foods and food prepared by traditional method.

4.6 Select tableware for meals and use rules for correct table setting for simple meals.

5. Food preparation.

5.1 Demonstrate safety and sanitation procedures to follow in the kitchen.

5.2 Describe hygienic practices to follow in handling food.

5.3 Identify first aid measures for minor kitchen injuries.

5.4 Demonstrate the correct use and care of kitchen equipment, tools and utensils.

5.5 Demonstrate correct measuring techniques.

5.6 Use equivalent measurements to convert recipe yields.

5.7 Identify foods that need refrigeration and proper methods to store leftover food.

5.8 Demonstrate basic principles of mild cookery.

5.9 Demonstrate basic principles of quick bread preparation.

	5.10	Demonstrate basic principles of egg cookery.
	5.11	Demonstrate basic principles of preparing simple salads.
	5.12	Demonstrate basic principles of fresh fruit preparation.
E. Textiles and apparel.		
1. Socio-psychological aspects of clothing.	1.1	Analyze the relationship between clothing, behavior and social expectations.
	1.2	Identify appropriate dress for various occasions and roles.
2. Physical well-being and enhancement.	2.1	Analyze grooming and clothing factors affecting personal appearance.
	2.2	Identify proper habits for caring for the body.
	2.3	Practice personal hygiene.
	2.4	Evaluate consumer product choices for body care and hygiene.
3. Wardrobe planning.	3.1	Evaluate factors affecting clothing selection.
	3.2	State principles to follow for planning a wardrobe.

	3.3	Evaluate design principles to use when making clothing choices.
4. Fashion.	4.1	Identify styles, fashions and trends in clothing.
	4.2	Evaluate clothing appropriateness for the occasion.
5. Consumer aspects of clothing.	5.1	Identify legislation that has impacted upon the textile and apparel industry.
	5.2	Demonstrate rules for comparative shopping in clothing.
	5.3	Identify the influences of advertising upon the clothing consumer.
6. Textiles.	6.1	Relate fiber properties to intended use.
	6.2	Evaluate fabric construction to intended use.
	6.3	Identify characteristics of fabric finishes.
7. Textile product care.	7.1	Evaluate clothing care products and aids.
	7.2	Demonstrate correct procedures to use when laundering textile products in the washing machine and dryer.
	7.3	Demonstrate procedures to follow wehn ironing textile products.

8. Repair and construction.	8.1	Demonstrate proper use and care of the sewing machine.
	8.2	Demonstrate proper use and care of essential sewing and pressing equipment.
	8.3	Construct a simple wearing apparel or other item using a pattern and sewing machine.
	8.4	Demonstrate the repair of clothing fasteners, zippers and torn hems.
F. Occupations/careers.		
1. Occupations/careers.	1.1	Identify career opportunities related to expertise in the areas of home economics related areas.
	1.2	Analyze jobs and requirements in home economics related areas.
	1.3	List qualities contributing to employability.
	1.4	Develop a plan for pursuing obtainable career goals.
G. Vocational Student Organizations.		
1. Vocational student organization membership.	1.1	Participate in a vocational organization.
	1.2	Identify the advantages of participating in a vocational student organization.

	1.3	Participate as a member of a vocational student organization.
	1.4	Participate regularly in chapter meetings and activities at the state and local levels.
	1.5	State the purposes of the organization.
	1.6	Recite the Creed and interpret it.
	1.7	Plan and conduct the Power of One project.
2. Development of leadership skills through VSO and related activities.	2.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
(CONSUMER AND HOMEMAKING EDUCATION)
20.0101 Comprehensive Consumer and Homemaking Education
Level II

20.0101 Comprehensive Consumer and Homemaking Home Economics -- an instructional program that prepares individuals for the occupation of homemaker. Includes instruction in all home economic subject matter areas concerned with the economics, social and cultural conditions, needs of individuals and families, and emphasizes the basic principles and interrelationships among these areas.

Program Objective		Standard of Student Expectation
The program will provide instruction in:		The student will be expected to:
A. Consumer education and resource management		
1. Decision making process.	1.1	Use the decision making process to help determine and meet individual and family goals and needs.
	1.2	Relate the impact of values and goals upon family decision making.
	1.3	Identify ways values and goals are related to the use of resources.
	1.4	Apply decision making process for central decisions.
	1.5	Differentiate between social and economic decision making.
2. Management process.	2.1	Demonstrate the principles for managing the personal living environment.
	2.2	Develop a plan for reaching individual goals.

2.3 Compare use of time, energy, and money in meeting needs and goals.

2.4 Identify resources, economic and non-economic, available for financial planning.

2.5 Analyze factors that influence money management decisions.

2.6 Evaluate the role of decision making in management.

3. Consumerism.

3.1 Explain the concept of the free enterprise system in the U.S.

3.2 Identify basic characteristics of the American economy.

3.3 Identify important principles on which our economic system is based.

3.4 Evaluate the impact of consumer choices on personal finances, on business and on the economy.

3.5 Explain the difference between a productive and consumptive society.

3.6 Generate a description of how resources are used in the production of goods and services.

3.7 Identify ways resources can be conserved.

3.8 State the definition of inflation.

3.9 Analyze the role inflation plays in our economic system.

3.10 List problems caused by inflation.

3.11 Identify differences between inflation and deflation.

3.12 Identify and describe the types of taxes in the U.S.

3.13 Identify agencies that protect and serve consumers.

3.14 Identify government legislation affecting consumers.

3.15 Describe the role of community agencies in consumer protection.

3.16 Identify procedures a consumer should follow when product performance does not meet expectations.

3.17 Describe the steps in carrying out a consumer complaint.

4. Credit.

4.1 Analyze personal credit worthiness based on character, capital and capacity.

4.2 Identify factors that affect credit rating.

4.3 Analyze the use of credit regarding present and future wants and income of the family.

	4.4	Identify types, sources and relative cost of credit.
	4.5	Describe appropriate procedures in obtaining credit and repaying credit loans.
	4.6	Demonstrate the ability to compute interest on loans.
	4.7	Identify current legislation and regulations concerning consumer credit.
5. Advertising.	5.1	Describe advertising techniques of the mmarketplace that influence personal and family buying decisions.
	5.2	Identify influences of advertising on the consumer.
	5.3	Identify various agencies, laws and methods used to regulate advertising.
	5.4	Recognize and categorize stereotyping in advertising.
6. Insurance.	6.1	Describe the function and purpose of insurance.
	6.2	Identify various types of insurance and describe the area of protection each provides.
	6.3	Analyze the family's insurance needs in relation to various life cycle stages.
	6.4	Identify the correct procedure for obtaining insurance.

7. Savings and investing.

7.1 Identify ways, places and reasons to save and invest for different purposes.

7.2 Compare available saving and investment plans.

B. Housing, home furnishings and equipment.

1. Socio-psychological aspects of housing.

1.1 Evaluate the function and purpose of housing for the individual.

1.2 Analyze factors influencing housing needs for families and individuals in varying circumstances.

1.3 Evaluate human and environmental factors to determine housing needs.

1.4 Categorize special needs of the elderly and handicapped.

2. Consumer aspect of housing.

2.1 Identify alternatives for housing and criteria for selection.

2.2 Determine available sources of costs of financing housing.

2.3 List sources of obtaining consumer information for housing, furnishings and equipment.

2.4 Demonstrate ways to conserve resources in the living environments.

3. Furniture and equipment.	3.1	Identify furniture and equipment needs for various stages of the family life cycle.
	3.2	Establish criteria for selecting and buying furnishings and equipment.
	3.3	Demonstrate the proper use and care of furnishings and equipment.
	3.4	Apply safety rules to storage areas and home.
	3.5	Design pleasing area arrangements.
4. Aesthetics and the living environment.	4.1	Analyze design principles and theory influencing interior design.
	4.2	Evaluate housing floor plans.
	4.3	Determine lighting and wiring factors related to a house plan.
	4.4	Identify the purpose and meaning of symbols and abbreviations used in blue prints.
	4.5	Plan for meeting budgetary constraints when decorating the home.
5. Care and maintenance of the home.	5.1	Summarize routine care and maintenance of home care tasks.
	5.2	Identify factors to consider when various types of home repair are needed.

	6. Housing trends and issues.	6.1	Analyze housing trends and issues in contemporary and past society.
C.	Food and nutrition.		
	1. Significance of food.	1.1	Identify physical, psychological, social, economic, and geographical reasons for food choices.
		1.2	Identify cultural variations in menus and meal service.
	2. Consumer aspects of food and nutrition.	2.1	Identify shopping trends that impact family food costs.
		2.2	Analyze the role of advertising on family food purchases.
		2.3	State influences of value upon food selection.
		2.4	Identify food additives.
		2.5	Recognize government agencies that regulate business or agriculture or protect consumers.
		2.6	Explain procedures in registering a consumer complaint.
		2.7	Develop food budgets for families of varying sizes, income levels, and nutritional needs.
		2.8	Compute meal costs.

	2.9	Explain how food distribution systems affect food costs and choices.
3. Nutrition.	3.1	Identify the effects of specific nutrient deficiencies.
	3.2	Identify the effects of stress, alcohol, and drugs, on nutritional status.
	3.3	Identify nutrient requirements across the life cycle.
	3.4	Use U.S. recommended daily allowance to evaluate adequacy of dietary patterns.
	3.5	Explain reasons for weight losss and weight gain.
	3.6	Compare weight gain and loss methods as to nutrient risk.
	3.7	Identify nutritional needs of individuals in special categories.
	3.8	Identify services provided by local, state, and federal agencies.
	3.9	Demonstrate the process to locate valid sources of nutrition information.
	3.10	Evaluate dietary patterns in terms of short and long range health implications.

4. Meal management.	4.1	Plan meals for the family to conserve time, energy and fuel.
	4.2	Use rules for correctly writing menus.
	4.3	Organize work habits toward saving of motion.
	4.4	Identify types of table service according to need and demonstrate rules for each.
	4.5	Demonstrate rules for table settings for various situations.
5. Food preparation.	5.1	State rules for care and use of large and small kitchen appliances.
	5.2	Interpret and follow recipe.
	5.3	Identify and use basic recipe terms, abbreviations, equivalents and substitutions.
	5.4	Select, compare and prepare meats and foods containing meats.
	5.5	Select, prepare and evaluate quick bread variations.
	5.6	Plan, prepare, serve and evaluate sauces.
	5.7	Select, prepare and evaluate vegetables.
	5.8	Select, prepare and evaluate cakes and frostings.

		5.9	Use rules for correct food storage to insure safety and sanitation.
D.	Human development, family living and parenthood education.		
	1. Self-understanding.	1.1	Identify examples of maturity as a process of changing from total dependence to degrees of independence.
		1.2	Identify factors that influence individual development and maturity.
		1.3	Identify ways that the family contributes to the development of its members.
	2. Personal decision making.	2.1	Demonstrate skills in the decision making process in a group situation.
		2.2	Relate societal, cultural and economic changes to decisions made in the family.
	3. Communication and interpersonal relationships.	3.1	Analyze factors in building healthy interpersonal relationships.
		3.2	Identify methods which nurture the marital relationship.
		3.3	Develop alternative solutions to interpersonal conflicts baed on adequate knowledge of another person's values, needs, and feelings.
		3.4	Analyze family interaction patterns.

	3.5	Demonstrate techniques to promote effective family communication.
	3.6	Identify ways to promote effective family communication.
	3.7	Apply communication skills in the resolution of family conflicts.
4. Preparation for marriage and family living.	4.1	Generate realistic expectations of marriage.
	4.2	Examine ways that an individual can prepare for multiple roles in adulthood.
	4.3	Analyze family laws and customs.
	4.4	Evaluate factors to consider when selecting a mate.
	4.5	Evaluate the purpose of marriage and family life.
5. Family management.	5.1	Describe problems, rewards, and adjustments in the family over the life cycle.
	5.2	Evaluate changes in the family over the life cycle.
	5.3	Identify types of family life styles and responsibilities of each.
	5.4	Analyze factors that influence the type of family lifestyle chosen.

		5.5	Identify family crisis situations that cause stress.
		5.6	Analyze ways to cope with stress and crisis, both personal and family.
	6. Development care and guidance of children.	6.1	Analyze and demonstrate care techniques to meet the basic needs of children.
		6.2	Identify and evaluate factors that have a positive and negative influence on the child's development.
		6.3	Analyze principles of development of the child from toddler age through five years.
E.	Textiles and apparel.		
	1. Socio-psychological aspects of clothing.	1.1	Analyze the effects clothing has upon feelings of personal worth and social acceptance.
		1.2	Identify the function of clothing to enhance and promote a positive self-concept.
		1.3	Evaluate the effects of peer pressure on clothing selection.
	2. Physical well-being and enhancements.	2.1	Evaluate appropriateness of clothing for various occasions.
		2.2	Identify clothing needs and plan for basic wardrobe.

	2.3	Demonstrate use of rules for selecting grooming aids.
	2.4	Demonstrate use of rules for grooming techniques.
3. Wardrobe planning.	3.1	Compare wardrobe needs of family members with their various roles.
	3.2	Assess wardrobe needs at various stages of the life cycle.
	3.3	Identify factors to consider in managing a wardrobe.
4. Fashion.	4.1	Relate the role of the apparel and fashion industry to the consumer impact on fashion trends.
	4.2	Analyze origin of fashion and fashion cycles.
	4.3	Identify the role of fashion accessories and the effect upon the marketplace.
5. Consumer aspects of clothing.	5.1	Assess the importance of regulation on consumer protection in apparel and textiles.
	5.2	Identify laws, policies and regulations related to the apparel industry.
	5.3	Devise a list of agencies that provide consumer protection services.

	5.4	Relate clothing consumption patterns to the economic limitations of the family.
6. Textiles.	6.1	Identify textile products at the various stages of the production cycle.
	6.2	Relate the properties of textile fibers and blends to their use and care.
7. Textile product care.	7.1	Interpret and use information required in textile product care labels.
	7.2	Demonstrate proper hand laundering procedures.
	7.3	Demonstrate skills needed for ironing or pressing special garments and textiles.
8. Apparel repair and construction.	8.1	Demonstrate use and care of the sewing machine, sewing equipment and pressing equipment.
	8.2	Evaluate fabric choices according to pattern selected and other factors.
	8.3	Demonstrate the rules for using a pattern guide the construction of a garment.
	8.4	Construct a clothing item that contains one or more advanced construction techniques.
	8.5	Evaluate ready-made garments for alteration feasibility.

8.6 Demonstrate skills needed for basic garment alteration.

F. Occupations and careers.

1. Occupations and careers.

1.1 Identify career ladders in areas related to home economic related occupations.

1.2 Identify personal traits needed for success in various home economics related jobs.

1.3 Compare skills, competencies and training needed for various home economics related jobs.

G. Vocational student organizations.

1. Vocational student organizations.

1.1 Participate in a vocational organization.

1.2 Identify the advantages of participating in vocational student organizations.

1.3 Participate as a member of a vocational student organization.

1.4 Participate regularly in chapter meetings and activities at the state and local levels.

1.5 State the purposes of the organization.

1.6 Recite the Creed and interpret it.

1.7 Plan and conduct the Power of One project.

2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
(CONSUMER AND HOMEMAKING EDUCATION)
20.0102 Child Development, Care and Guidance

20.0102 Child Development, Care and Guidance -- an instructional program that prepares individuals to understand children's physical, mental, emotional and social growth and development as well as their care and guidance. The program draws on aspects of the social and biological sciences of which home economics is a component. Observation and actual experiences with children and their parents are integral parts of the program.

Program Objective

The program will provide instruction in:

1. Using the decision making process.

Standard of Student Expectation

The student will be expected to:

1.1 Identify basic physical, emotional, intellectual and social needs.

1.2 Describe ways of meeting basic human needs of individuals, families and groups.

1.3 Analyze factors that influence personal values and goals.

1.4 Describe conflicts in values and goals that may arise as an individual assumes different roles.

1.5 Describe conflicts in values and goals that may arise as an individual assumes different roles.

1.6 Clarify personal values and goals.

1.7 Identify types of decisions that are made by individuals and families.

	1.8	Identify the basic steps in making decisions.
	1.9	Analyze factors that influence individual and family decisions.
	1.10	Apply the decision making process to home and family situations.
2. Managing human resources.	2.1	Identify the tasks that maintain or improve the quality of homelife.
	2.2	Assess interests and abilities of family members.
	2.3	Identify possible divisions of labor to accomplish family tasks.
	2.4	Apply principals of management to the allocation of available human resources.
3. Using community resources.	3.1	Describe physical and mental health services provided by community agencies and organizations.
	3.2	Describe consumer services, social services, and family services provided by community agencies and organizations.
	3.3	Investigate procedures to obtain community services to meet the needs of children.
4. Examining rights and responsibilities.	4.1	Identify basic consumer rights in purchasing and using goods and services.

Examining rights and responsibilities cont'd.	4.2	Identify basic consumer responsibilities in purchasing and using goods and services.
	4.3	Identify basic financial and legal rights related to the home and family.
	4.4	Identify basic financial and legal responsibilities related to the home and family.
	4.5	Examine federal, state and local laws that protect children.
	4.6	Investigate sources of consumer information and protection.
	4.7	Explain individual responsibilities in planning families.
	4.8	Resolve family and consumer problems using appropriate procedures and agencies.
5. Exploring employment opportunities and requirements.	5.1	Identify career opportunities in occupations relating to the care of children.
	5.2	Describe skills and job requirements, job openings, career ladders, and advancement possibilities for home economics related occupations.
	5.3	Identify opportunities for training in home economics related occupations.
	5.4	Relate occupations to personal skills, aptitudes and interests.

6. Understanding human reproduction.	6.1	Define scientific terms used to describe the parts and functions of the male and female reproductive system.
	6.2	Explain the biological process of conception.
	6.3	Describe human development from conception to birth.
	6.4	Explore the issues related to recent scientific developments in the field of human reproduction.
7. Examining Family Planning.	7.1	Explore the factors that may influence the decision to become a parent.
	7.2	Examine adoption as an alternative to natural parenthood.
	7.3	Compare contraception techniques and devices.
	7.4	Determine the financial cost of having or adoapting a baby.
8. Providing prenatal and postnatal care for mother and developing child.	8.1	Identify the common symptoms of pregnancy.
	8.2	Explain the importance of proper prenatal health care.

	Providing prenatal and postnatal care for mother and developing child cont'd.	8.3	Describe possible effects of tobacco, drugs, alcohol and veneral disease on the developing fetus.
		8.4	Describe the services that various medical specialists provide during the prenatal period.
		8.5	Discuss complications and risk factors associated with pregnancy.
		8.6	Describe physical and emotional changes which may occur in the mother during different stages of prenancy and childbirth.
		8.7	Identify basic emotional and physical needs of the mother during the post-partum phase.
9.	Understanding the birth process.	9.1	Identify signs that generally precede labor.
		9.2	Describe the stages of labor.
		9.3	Compare various methods of childbirth.
		9.4	Identify possible complications which may occur during childbirt.
10.	Analyzing the impact of changes in the family structure.	10.1	Explore the possible effects of alternate family structures upon children.
		10.2	Analyze the effects of changes in family structure brought about by the addition, loss or separation of family members.

11. Examining needs and care of children.	11.1	Identify needs and care of the infants during the first year.
	11.2	Describe activities conducive to optimum development of the infant.
	11.3	Identify factors that influence the selection of a caregiver.
	11.4	Compare facilities and services of community child care centers to care in the home.
12. Examining growth and development patterns.	12.1	Relate basic human needs to the total development of the child.
	12.2	Describe characteristics of positive and negative self-concept.
	12.3	Analyze factors that influence self-concept.
	12.4	Describe the stages of physical, emotional, social and intellectual development.
	12.5	Relate patterns of behavior to stages of development.
	12.6	Analyze the effects of values, goals, and standards upon human development.
	12.7	Examine the influences of heredity and environment on the growth and development of the individual.

13. Applying parenting skills.

13.1 Describe parenting functions that may be performed by family members and others.

13.2 Describe the contribution of communication skills to parenting.

13.3 Examine means that may be used to encourage acceptable behavior and to modify disruptive behavior.

13.4 Differentiate between symptoms and causes of behavioral problems.

13.5 Explore sources of external assistance that may aid in parenting.

13.6 Demonstrate parenting strategies that contribute to total family development.

14. Providing for the special needs of exceptional children.

14.1 Identify indicators of exceptional needs in children.

14.2 Identify the potential capabilities of exceptional children.

14.3 Describe the needs of families with exceptional children.

14.4 Plan strategies that meet the needs of families with exceptional children.

15. Coping with stress and crises.

15.1 Identify possible sources of stress and crisis.

15.2 Identify positive and negative aspects of stress.

15.3 Describe strategies for reducing or eliminating stress and crisis.

15.4 Explore the impact of unwanted pregnancies on family members.

15.5 Identify alternatives when unwanted pregnancies occur.

15.6 Analyze possible causes and effects of abuse among family members.

15.7 Identify the forms and symptoms of child abuse.

15.8 Analyze alternate courses of action when abuse is suspected.

15.9 Analyze the consequences of use, misuse and abuse of substances.

15.10 Apply coping techniques to situations of stress and crisis.

15.11 Describe the obligations of family members to maintain a healthy family environment.

16. Maintaining health of children.	16.1	Identify the signs and symptoms of common diseases and ailments.
	16.2	Analyze factors affecting the incidence and severity of communicable diseases.
	16.3	Identify diseases for which immunizations are available.
	16.4	Identify physical conditions and symptoms that require medical assistance.
	16.5	Describe recommended daily and periodic dental care procedures.
	16.6	Describe recommended period optical care procedures.
	16.7	Assess relationship of physical fitness, grooming and appearance to health maintenance.
17. Selecting health care products and services.	17.1	Investigate possible fraudulent or deceptive health care products and services.
	17.2	Identify practices that contribute to keeping down the costs of health care products and services.
	17.3	Evaluate the factors that influence selection and use of health care products and services for children.

18. Relating nutrition to health.	18.1	Explore the advantages and disadvantages of food additives.
	18.2	Describe habits and conditions that lead to malnutrition.
	18.3	Evaluate the effects of food intake on physical and emotional health.
19. Establishing nutritional eating patterns.	19.1	Evaluate diets based on food facts and food fallacies.
	19.2	Assess the impact of food allergies and special diets on eating patterns.
	19.3	Plan daily food intake to meet various nutritional needs for children.
20. Applying buying practices.	20.1	Evaluate the factors that influence the selection of goods and services for children.
	20.2	Interpret the label information provided on products purchased by children.
	20.3	Analyze the positive and negative aspects of comparison shopping.
	20.4	Apply comparison shopping procedures to the purchase of goods and services for children.

21. Practicing home safety.	21.1	Identify practices and attitudes that contribute to home safety.
	21.2	Describe conditions that create a safe home environment for children.
	21.3	Apply preventive measures to home conditions that may cause accidents or injuries to children.
22. Administering First Aid.	22.1	Identify common home emergencies that may require first aid.
	22.2	Assemble the basic items in a household first aid kit.
	22.3	Demonstrate appropriate first aid procedures for common accidents.
23. Vocational student organization membership.	23.	Participate in a vocational organization.
	23.1	Identify the advantages of participating in vocational student organizations.
	23.2	Participate as a member of a vocational student organization.
	23.3	Participate regularly in chapter meetings and activities at the state and local levels.
	23.4	State the purposes of the organization.

	23.5	Recite the Creed and interpret it.
	23.6	Plan and conduct the Power of One project.
24. Development of leadership skills through VSO and related activities.	24.1	Demonstrate leadership development in:
	a.	Social and interpersonal skills.
	b.	Oral and written communication.
	c.	Organization and management skills.
	d.	Civic responsibilities.
	e.	Parliamentary procedures.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
(CONSUMER AND HOMEMAKING EDUCATION)
20.0103 Clothing
Level I, Special Needs

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. The world of textiles.	1. Explain the world of textiles.
	1.1 List and identify common natural and man-made fibers.
	1.2 Classify natural fibers as to origin.
	1.3 Distinguish between loose and firm weaves.
	1.4 Identify grainline and selvage.
	1.5 Select and identify a sample of each design.
	1.6 Identify each type of line.
	1.7 Compare effects of lines on figure types.
	1.8 Identify primary and secondary colors and use them in wardrobe planning.
2. Selection and maintenance of tools and equipment.	2. Demonstrate the selection, use, care and proper storage of tools and equipment used in clothing construction.
	2.1 Identify small sewing tools and equipment.

2.2 Demonstrate proper use and care of small tools and equipment.

2.3 Practice using small tools and equipment.

2.4 Name and identify machine parts.

2.5 Demonstrate threading a machine and bobbin.

2.6 Explain how to remove lint.

2.7 Demonstrate how to set up and put away the machine.

2.8 Practice changing a needle.

2.9 Identify equipment used in pressing.

2.10 Identify types of irons.

2.11 Demonstrate procedures for using irons and ironing boards.

2.12 State safety rules to follow when using an iron.

2.13 Practice safety rules during lab experiences.

3. Basic construction techniques.	3. Demonstrate skills in performing basic construction techniques.

3.1 Demonstrate skill in stitching darts.

3.2 Demonstrate pattern layout.

3.3 Demonstrate cutting procedures.

3.4 Attempt to ease one piece of fabric to another.

3.5 Demonstrate seam finishes.

3.6 Demonstrate proper marking of symbols.

3.7 Name and define garmet fasteners.

3.8 State procedure for sewing on fasteners.

3.9 Identify various types of buttons.

3.10 Practice attaching buttons.

3.11 Attempt making buttonholes by machine.

3.12 Insert a variety of zippers.

3.13 Identify hem finishes.

3.14 Demonstrate hemming techniques.

4. Altering and repairing clothing.

4. Apply the proper techniques for altering and repairing clothing.

4.1 Identify ripping tools.

4.2 State safety procedures to follow when using ripping tools.

	4.3 Practice removing stitches from ready made garments.
	4.4 Explain how to use mending tape.
	4.5 Describe and demonstrate steps used in maing a hemmed patch.
	4.6 Cite reasons for garment alterations.
	4.7 Describe an alteration ticket.
	4.8 Practice procedures for lengthening and shortening hems.
	4.9 Practice side seam alterations.
5. Proper care of clothing.	5. Demonstrate skills for the proper care of clothing.
	5.1 Give reasons for clothing care.
	5.2 State label information related to care.
	5.3 Describe and demonstrate laundry procedures.
	5.4 Demonstrate use of a washing machine.
	5.5 Practice procedure for using a dryer.
	5.6 State safety rules for doing laundry.

6. Vocational student organization membership.	6.1 Identify the advantages of participating in vocational student organizations. 6.2 Participate as a member of a vocational student organization.
7. Development of leadership skills through VSO and related activities.	7. Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Civic responsibilities. d. Parliamentary procedures.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
(CONSUMER AND HOMEMAKING EDUCATION)
20.0103 Clothing and Textiles
Level I

20.0103 Clothing and Textiles -- an instructional program that prepares individuals to understand the social, psychological, and physiological aspects of clothing and textiles; the nature, acquisition, and use of clothing and textile products; the selection, construction, maintenance, and alteration of clothing and textile products; and the effect of consumer choices on the individual and family as well as the clothing and textile industry.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Pattern and fabric selection.	1. Select pattern and fabric.
	1.1 Match terms associated with pattern and fabric selection to correct definitions.
	1.2 Explain ways to test fabric in a store.
	1.3 Distinguish between information found on front and back of the pattern envelope.
	1.4 Determine pattern size and type.
	1.5 Select pattern and fabric yardage.
2. Using Sewing Equipment.	2. Use sewing equipment correctly and safely.
	2.1 Identify cutting, measuring, marking, pressing, and miscellaneous sewing equipment.
	2.2 Demonstrate safety techniques.

Using sewing equipment cont'd.	2.3 Match clothing terms to correct functions/descriptions. 2.4 Explain how pressing and ironing differ. 2.5 Measure common sewing lengths. 2.6 Select equipment needed for sewing project. 2.7 Identify principal parts of the sewing machine. 2.8 Match sewing machine parts to their functions/descriptions. 2.9 Complete a chart on sewing machine problems and their causes. 2.10 Demonstrate the ability to stitch straight, curved, broken and wavy lines. Turn corners, stitch sharp angle turns and stitch a folded edge.
3. Basic sewing techniques.	3. Perform basic sewing techniques. 3.1 Match terms associated with basic sewing techniques to correct definitions. 3.2 Identify types of information contained on pattern guidesheet. 3.3 Demonstrate the ability to complete a simple garment according to established criteria.

4. Fibers.	4. Identify fibers. 4.1 Identify characteristics for each of the natural and man-made fibers. 4.2 List desirable and undesirable characteristics of man-made natural fibers. 4.3 Identify types of basic weaves. 4.4 Name fabric finishes and explain why they are applied. 4.5 Identify natural fibers through the use of burn tests.
5. Textile labeling laws.	5. Describe textile labeling laws. 5.1 Identify kinds of information found on label and hang tags. 5.2 Distinguish between voluntary and mandatory labeling. 5.3 List steps recommended by the Federal Trade Commission to stop unfair commercial practices. 5.4 Identify laws which protect the consumer through textile labeling.
6. Clothing selection and purchasing.	6. Demonstrate skill in stretching. 6.1 Identify situations where clothing wants are more important than clothing needs.

6.2 List spending habits to follow when buying clothing.

6.3 List factors that will stretch the clothing dollar.

6.4 Describe indications of fine workmanship in a garment.

7. Vocational student organization membership.

7. Participate in a student organization activities.

7.1 Identify the advantages of participating in vocational student organizations.

7.2 Participate as a member of a vocational student organization.

7.3 Participate regularly in chapter meetings and activities at the state and local levels.

7.4 State the purposes of the organization.

7.5 Recite the Creed and interpret it.

7.6 Plan and conduct the Power of One project.

Level II

1. Fabrics.	1. Work with a variety of fabrics.
	1.1 Name desirable fabric characteristics.
	1.2 Demonstrate the ability to work with a variety of fabric types.
2. Construction skills.	2. Demonstrate skills in clothing construction.
	2.1 Match terms associated with construction techniques to the correct definitions.
	2.2 Describe the appearance of offgrain yard goods.
	2.3 Describe characteristics of garments cut off-grain.
	2.4 Identify functions of interfacing.
	2.5 Select and use interfacing correctly.
	2.6 Use tape when and where necessary on a garment.
	2.7 Select from a list generally accepted rules of sewing.
	2.8 Construct a garment according to established criteria.
	2.9 Demonstrate intermediate skills in construction.

3. Laundry procedures.	3.	Demonstrate correctly laundry procedures.
	3.1	List correct laundry procedures.
	3.2	List general directions for hand laundry.
	3.3	Demonstrate removal of stains requiring special treatment before laundry.
	3.4	List factors to consider when selecting and using laundry aids.
4. Vocational student organization membership.	4.	Participate in a vocational organization.
	4.1	Identify the advantages of participating in vocational student organizations.
	4.2	Participate as a member of a vocational student organization.
	4.3	Participate regularly in chapter meetings and activities at the state and local levels.
	4.4	State the purposes of the organizations.
	4.5	Recite the Creed and interpret it.
	4.6	Plan and conduct the Power of One project.

5. Development of leadership skills through VSO and related activities.

5. Demonstrate leadership development in:
    a. Social and interpersonal skills.
    b. Oral and written communication.
    c. Organization and management skills.
    d. Civic responsibilities.
    e. Parliamentary procedures.

1. Careers in clothing and textiles.	1. Identify careers in clothing and textiles. 1.1 List career opportunities in clothing management. 1.2 Survey local community for jobs available in clothing management. 1.3 Describe professional competencies required of different occupations in clothing management. 1.4 Complete job applications.
2. Fashion trends and functions.	2. Identify fashion trends and clothing functions. 2.1 Distinguish between fad, fashion, and style. 2.2 Identify functions of clothing. 2.3 Name present day styles taken from the past. 2.4 Describe the current fashion trend. 2.5 Analyze clothing as to its function.
3. Economic aspects of clothing.	3. Describe the economic aspects of clothing. 3.1 List guidelines to follow when buying apparel for family members. 3.2 List examples of consumer responsibilities when buying apparel.

	3.3	Evaluate quality, comparing custom-made and ready-made garments.
	3.4	List ways to extend a personal wardrobe with use of accessories.
4. Garment construction.	4.	Demonstrate skill in constructing a garment.
	4.1	Construct a garment using the correct, measuring, cutting, pinning and marking techniques.
	4.2	Construct garment according to established criteria.
	4.3	Apply advanced skills in clothing construction.
5. Fibers and fabrics.	5.	Identify fibers and fabrics.
	5.1	Identify fabric samples according to weave and fiber characteristics.
	5.2	Identify samples of basic weaves.
	5.3	Identify purposes of different fabric finishes.
	5.4	Describe ways to care for specified fabrics and finishes.
6. Garment maintenance.	6.	Demonstrate how to extend the life of a garment.
	6.1	Explain differences between terms repairing, remodeling, and remaking.

6.2 Demonstrate ways of patching torn fabric.

6.3 Cite examples for remodeling an article of clothing.

6.4 List items of information needed before attempting stain removal.

6.5 Demonstrate correct stain removal procedure for each given situation.

6.6 Alter a garment to achieve correct fit.

6.7 Identify common repairs needed in clothing.

6.8 Repair an article of clothing.

7. Vocational Student organization membership.

7. Participate in a vocational organization.

7.1 Identify the advantages of participating in vocational student organization.

7.2 Participate as a member of a vocational student organization.

7.3 Participate regularly in chapter meetings and activities at the state and local levels.

7.4 State the purposes of the organization.

7.5 Recite the Creed and interpret it.

7.6 Plan and conduct the Power of One project.

8. Development of leadership skills through VSO and related activities.	8. Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
CONSUMER AND HOMEMAKING EDUCATION
20.0104 Consumer Education
Level I

20.0104 Consumer Education -- an instructional program that prepares individuals to understand the values, needs, wants, goals, and resources that enable youth and adults to make rational decisions that contribute to fmaily stability and quality of life. Includes instruction in budgeting and spending plans, use of credit, savings, investments, taxes, consumer buying, and consumer rights and responsibilities.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Consumer practices.	1. Demonstrate effective practices as a consumer.
	1.1 Identify characteristics of a wise shopper.
	1.2 Evaluate labels and warranties.
	1.3 List factors that influence consumer choices.
	1.4 Explain how the use of a shoppin list could prevent impulse buying.
2. Consumer rights and responsibilities.	2. Identify rights and responsibilities of the consumer.
	2.1 Describe the consumer's role in issue affecting purchasing decisions.
	2.2 Identify each right and responsibility which the consumer must exercise.

3. The marketplace and the consumer.	3. Identify factors in the marketplace which affect consumers.
	3.1 Discuss the kinds of information which are useful.
	3.2 Identify fraudulent or unwarranted claims in advertising.
	3.3 Identify how computers are useful for consumer in decision making.
4. Consumer choices.	4. Describe how needs, values and goals influence consumer choices.
	4.1 Define personal values.
	4.2 List the most important values which relte to financial resources.
	4.3 Identify short-term and long-term goals and relate these to personal spending plans.
	4.4 Give examples of the difference between needs and wants.
5. Impact of financial resources on families.	5. Describe how finanical resources can enhance the individual's quality of life.
	5.1 Identify the various family life cycles and characteristics of each.
	5.2 Demonstrate how each stage of family life modifies the individual's financial picture.

5.3 Describe how finanical planning contributes to the ability to the individual and/or family to cope with emergencies.

5.4 Describe how financial satisfaction of a family is related to the effective use of resources.

1. Utilizing financial resources.

1. Use accurate, up-to-date information in making decisions regarding obtaining, protecting, and using financial resources.

   1.1 Give examples of resources, human and nonhuman, available to explore his/her values and goals related to career choices.

   1.2 Identify the ways in which career choices influence and individual's choices as a consumer of goods and services.

   1.3 Explain ways in which knowledge and skills can be used to protect financial resources.

   1.4 Identify sources of current information concerning rights and responsibilities under the law related to consumer protection.

   1.5 Describe how insurance can be used to protect financial resources, both human and non-human.

   1.6 Set tentative short and long-term goals related ot personal financial resources.

   1.7 Demonstrate a knowledge of how to use the services offered by banking institutions.

   1.8 Explain the concept of living on future income through the use of credit and borrowing.

2. Using a spending plan.

2. Utilize a spending plan in managing financial resources.

   2.1 Describe the four basic parts of a budget, and based on those four elements, to develop a sample budget.

   2.2 Identify and to describe ways in which money is used for current operations, short-term future savings, and long-term capital.

   2.3 Explain the difference between fixed expenses and flexible expenses.

3. Individual and family needs.

3. Describe how to analyze individual and family needs for goods and services.

   3.1 Describe influences on consumer choices.

   3.2 Compare shopping practices used by consumers.

   3.3 Analyze influence of advertising and merchandising techniques on consumers.

   3.4 Identify various current market strategies.

4. Market strategies.

4. Demonstrate how to analyze and use advantageously current market strategies.

   4.1 Discuss the advantages and disadvantages of credit purchasing.

	4.2 Locate product information in a consumer guide.
	4.3 Discuss some reasons for renting or leasing equipment or services instead of purchases.
	4.4 Demonstrate how to utilize the principles of comparison shopping and the relationship of price to quality and quantity.
	4.5 Demonstrate uses of computers in consumer decision-making (i.e. electronic banking, budgeting).
5. Impact of resources use on society.	5. Assess the impact of the individual and family uses of resources on society.
	5.1 Describe how deception in the marketplace may contribute to increased costs and services for all consumers.
	5.2 Describe how the consumer's ability to manage sources may influence availability of products and services.
	5.3 Define the need for consumer knowledge of reliable information concerning products and services.
6. Selection and maintenance of products.	6. Demonstrate how to select, purchase and maintain various products.
	6.1 Determine the appropriate purchase for particular needs.

6.2 Relate the price of a product to quality and quantity.

6.3 Explain the differences between brand name and store brand products.

6.4 Determine the need for guarantees and service provisions when making major purchases.

6.5 Determine the appropriate store where specific products can be purchased.

1. Financial changes during the life cycle.	1. Plan for predictable changes during the life cycle in order to deal with financial crisis and to make wise consumer decisions. 1.1 Identify the stages of a family cycle and predictable social and economic changes arising from each stage. 1.2 Identify some social and economic factors which may come at any point in the life cycle. 1.3 Apply knowledge of the economic needs of a family throughout the family life cycles.
2. Interacting roles of the consumer, business and government.	2. Analyze the interacting roles of the consumer, business and government and the effects on the economy. 2.1 Identify the effects of deceptive practices in the marketplace on the individual, family, and society. 2.2 Describe economic functions of consumer, business and government. 2.3 Analyze the decision-making process used by consumers. 2.4 Analyze the effect of consumer legislation and government agencies on the consumer and industry.

3. Consumer information.	3.	Obtain and respond to consumer information in order to exercise rights and responsibilities.
	3.1	Identify sources of consumer information and evaluate their accuracy and reliability.
	3.2	Define and describe the necessary elements of a contract.
	3.3	Recognize and respond to deceptive practices by oral or written complaint procedures.
4. Consumer credit.	4.	Analyze sources, costs and uses of consumer credit.
	4.1	Identify advantages and disadvantages of using credit.
	4.2	Determine the effects that the cost of credit has on the individual's finances.
	4.3	Select type and source of credit most appropriate for given needs (home, transportation, clothing, major appliances, etc.).
	4.4	Compute the cost of credit.
	4.5	Describe the importance of maintaining a good credit rating.

5. Financial planning.	5. Interpret how to use financial planning for the attainment of individual and family goals. 5.1 Describe types of banking services available to consumers. 5.2 Demonstrate the ability to handle a checking account, including how to write a check, balance a bank statement, and endorse a check. 5.3 Demonstrate knowledge about personal loans, 30 day notes, demand notes, automobile loans, mortgages, etc. 5.4 Compare potential risks and gains in various savings and investment plans. 5.5 Analyze types of insurance from individual/family protection.
6. Financial institutions and services.	6. Evaluate types of financial institutions and services they provide, including banks, savings and loan associations, credit unions, and finance companies. 6.1 Describe consumer services available thorugh financial agencies and institutions. 6.2 Evaluate sources and types of consumer information. 6.3 Select the type of institution that best meets a given situation.

	6.4 Identify a variety of available consumer education and protection programs.
7. Personal and family financial planning.	7. Design a comprehensive personal and family financial plan that reflects defined goals, values and priorities.
	7.1 List short and long-term financial goals based on the desired lifestyles.
	7.2 Recognize the importance of income as a determinant of lifestyle throughout the life cycle.
	7.3 Identify personal and societal changes which may effect financial planning over the life cycle.
	7.4 Develop an overview of the family life cycles and will demonstrate how each stage modifies the individual's financial picture.
	7.5 Explain the difference between fixed expenses and flexible expenses, and explain how each affects family or individual spending plans.
	7.6 Apply the principles of decision making to the process of financial planning.
	7.7 Develop a financial plan based on personal and family values, goals, priorities and income.

	7.8 Assess the impact of changes such as marriage, divorce, illness, loss of income, birth of a child, on the family's financial well being. 7.9 Suggest ways to modify a financial plan to meet changing conditions over the life cycle. 7.10 Analyze budgeting decisions through computer assisted activities.
8.Vocational student organization membership.	8. Participate in a vocational organization. 8.1 Identify the advantages of participating in vocational student organization. 8.2 Participate as a member of a vocational student organization. 8.3 Participate regularly in chapter meetings and activities at the state and local levels. 8.4 State the purposes of the organization. 8.5 Recite the Creed and interpret it. 8.6 Plan and conduct the Power of One project.

9. Development of leadership skills through VSO and related activities.

9. Demonstrate leadership development in:

   a. Social and interpersonal skills.

   b. Oral and written communication.

   c. Organization and management skills.

   d. Civic responsibilities.

   e. Parliamentary procedures.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
(CONSUMER AND HOMEMAKING EDUCATION)
20.0105 Exploratory Homemaking

20.0105 Exploratory Homemaking -- an instructional program that provides individuals in elementary, middle, and junior high school the opportunity to explore home economics subject matter areas. Includes instruction in the development of positive self-concepts; understanding personal growth and development; and relationships with peers and family members in becoming contributing members in the home, school, and community.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
Introduction to Vocational Home Economics	
1. Consumer and Homemaking program areas.	1. Explore the program areas of Vocational Home Economics Consumer and Homemaking Education and identify subject matters pertaining to each of these areas.
	1.1 List the program areas of Vocational Home Economics, Consumer and Homemaking Education: a. Child development, care and guidance. b. Clothing and textiles. c. Consumer education. d. Family living and parenthood education. e. Foods and nutrition.

	1.2 Describe the basic concepts included in each of the seven program areas of Home Economics.
2. Multi-roles of males and females.	2. Describe the multiple roles of males and females as wage earner, homemakers, and consumers. 2.1 Define homemaker, wage earner, and consumer. 2.2 Describe the responsibilities associated with these roles and explain how one individual may assume all three roles.
3. Opportunities in the occupation of Homemaking and related Home Economics areas.	3. Explain how the Vocational Home Economics program provides opportunities for individuals to acquire knowledge, attitudes, and skills necessary for the occupation of homemaking and other vocational choices related to the seven instructional areas of Home Economics. 3.1 List the vocations related to the Vocational Home Economics program. 3.2 Describe the personal attitudes of individuals required for the successful fulfillment of the roles of homemaker, wage earner, and consumer. 3.3 Describe and/or demonstrate skills associated with the listed vocations and roles.

Orientation to FHA

1. Student organizations.	1. Relate factual data about the Future Homemakers of America (FHA) and participate in FHA activities. 1.1 Define Future Homemakers of America. 1.2 Distinguish between types of FHA chapters: FHA and HERO. 1.3 State the purposes, motto, and creed of FHA/HERO. 1.4 Name the parts of the organizational structure of FHA. 1.5 Name the benefits of being an FHA member. 1.6 Describe the duties of the FHA officers. 1.7 List the FHA committees and explain their functions. 1.8 Participate in an installation ceremony.
2. Decision Making/Self-Awareness.	2. Make decisions based on individual values and goals. 2.1 Answer questions related to personal beliefs and feelings to increase self-awareness. 2.2 State individual values and goals.

Decision making/Self-awareness cont'd.	2.3 Utilize strategies to increase self-awareness. 2.4 List the steps in the decision making process. 2.5 Practice using the steps in decision making to resolve FHA concerns.
3. Parliamentary procedure.	3. Use parliamentary procedure in FHA/HERO meetings. 3.1 Arrange in order the parts of the order of business. 3.2 Describe the progression of a meeting.
4. Leadership skills.	4. Develop leadership abilities and apply knowledge gained in the classroom to school, home, and community through participation in FHA. 4.1 Develop an FHA project that utilizes the program objectives in one or more of the instructional areas of home economics. 4.2 Participate in local and state association activities.

Child Development, Care and Guidance

1. Physical, emotional and mental growth.	1. Identify the physical, social, emotional and mental growth characteristics of pre-school children and recognize the differences in the growth rates of children of the same age. 1.1 Define and give examples of the physical, social, emotional and mental growth of pre-school children. 1.2 Describe the behavior of children of the same age and give examples of the differences in their rate of development. 1.3 Explain the differences between heredity and environmental traits.
2. Needs of children.	2. Describe the basic needs of children and explain how these can be met. 2.1 List the basic needs of children. 2.2 Describe and/or demonstrate ways in which these needs can be met by individuals who provide care for these children.
3. Children's play.	3. Recognize the different types of children's play and explain the influence play has on children's development. 3.1 List and demonstrate different types of children's play.

	3.2 Explain how play contributes to the physical, social, and emotional and mental growth of children.
4. Safety for children.	4. Distinguish between safe and hazardous environment for young children.
	4.1 Recognize potentially deangerous situations for children and select the safest solutions.
	4.2 Plan a safe environment for children of different ages.
5. Characteristics of child care workers.	5. Describe responsible behavior of individuals caring for children.
	5.1 List the desired personal characteristics for a child care worker.
	5.2 Distinguish between responsibilities of parents and child care workers.
	5.3 List the procedures that should be followed when caring for children belonging to other individuals.

Clothing and Textiles

1. Selection, use and care of natural and synthetic fibers.	1. Apply knowledge to select, use and care for natural and synthetic fibers. 1.1 Define fiber, yarn, fabric, natural fibers, synthetic/man-made fibers, textiles and finishes. 1.2 Name the natural and synthetic fibers and describe their sources and uses. 1.3 Describe the advantages and disadvantages of natural and synthetic fibers and blends. 1.4 List tips for routine care of clothing. 1.5 Discuss energy saving methods when caring for clothing.
2. Influences of clothing and textiles on individuals.	2. Describe the social, psychological and physiological influences of clothing and textiles on the individual. 2.1 List the reasons that people wear clothes. 2.2 Discuss how first impressions are affected by clothing. 2.3 Analyze the appropriateness of clothing for various situations including occupational requirements.

3. Making personal choices in clothing and textiles.

3. Apply and practice skills to make general choices of clothing and textiles as an informed consumer.

   3.1 Define the terms classic and fad.

   3.2 Discuss examples to show how styles change.

   3.3 Describe ways in which various factors affect fashion trends.

   3.4 Identify some personal an cultural values and activities which affect clothing selection.

   3.5 Discuss how appearance and grooming affect one's self-concept.

   3.6 Define terms associated with the color wheel.

   3.7 Describe how the color of clothes affect a person's appearance.

   3.8 Identify colors, textures and lines that are personally becoming.

   3.9 Discuss examples of ways a wardrobe can be stretched by making wise clothing selections.

   3.10 Examine personal wardrobe for items to be recycled, repaired and/or combined for a new look.

Making personal choices in clothing and textiles cont'd.

3.11 List the advantages of planning ahead before shopping for clothing.

3.12 Examine a label and a hangtag and explain their functions.

3.13 Describe how to check for quality when buying clothing.

4. Basic construction skills.

4. Demonstrate and practice skills in either design or follow a design to construct a project which incorporates basic construction techniques utilizing hand sewing tools, lab equipment and the sewing machine.

4.1 Identify tools used for measuring, cutting, marking, hand sewing and pressing.

4.2 Demonstrate the use of sewing tools and lab equipment emphasizing good safety habits.

4.3 Identify and explain the use of the individual parts of a sewing machine.

4.4 Demonstrate how to safely operate a sewing machine.

4.5 Identify lengthwise, crosswise and bias grains and demonstrate fabric preparation and marking.

4.6 Examine a pattern envelope and a guide sheet and describe the information found on them.

4.7 Identify pattern symbols and demonstrate how to layout a pattern.

4.8 Demonstrate correct cutting and marking techniques.

4.9 Evaluate project.

Consumer Education

1. Consumer rights and responsibilities.	1. Recognize that all individuals are consumers and have consumer rights and responsibilities. 1.1 Define terms related to consumer education, such as: consumer, producer, rights, responsibilities, economy, values, goals, resources, goods and services, wants, needs, decision-making, brand name, warranty, advertising. 1.2 List consumer rights and identify the responsibilities that go with these rights. 1.3 Describe the differences between a managed and a free economy.
2. Consumer information.	2. Identify information relevant to the cost, content, use and care of consumer goods and services. 2.1 Examine product labels and differenіate between required and voluntary information. 2.2 Compare brand names on products and describe their influence on consumer choices. 2.3 Compare cost and quality of goods and services.

	2.4 Relate information found in a warranty and recognize the importanance of using the guarantee if needed.
3. Advertising.	3. Describe the effects of advertising on consumer choices.
	3.1 Differentiate between factual and non-informative advertising.
	3.2 Identify advertising techniques used to influence consumer choice.
	3.3 Describe the effects of advertising costs on consumer products and services.
4. Spending plan.	4. Formulate a wise spending plan using the decision making process.
	4.1 Analyze personal buying habits.
	4.2 Explain how impulsive spending and planned purchasing differ.
	4.3 Describe how goals influence purchasing decisions.
	4.4 Distinguish between various types of sales.
	4.5 List examples of needs and wants.

4.6 Discuss the availability of goods and services and its effects on price (economic, environmental and ecological conditions).

4.7 Review consumer periodicals to evaluate products.

4.8 Recall steps in the decision-making process and use them to formulate a wise spending plan.

5. Consumer services.

5. Identify and describe the services provided by consumer agencies.

5.1 List local, state, and national agencies.

5.2 List ways in which consumer agencies inform and protect consumers.

5.3 Demonstrate positive methods of communicating consumer complaints and satisfaction.

Family Living and Parenthood

1. Uniqueness of individuals and families.	1. Explain the uniqueness of individuals and families in order to increase self-unerstanding and understanding of others.
	1.1 Identify heredity and environmental factors and explain how these influence individuals and families.
	1A.2 List different types of family structures.
6. Individual behavior.	2. Describe responsibile behavior of individuals in the family, among friends, and in the school and community.
	2.1 Definf self-image, behavior, attitudes, and behavior.
	2.2 Describe positive and negative behavior when interacting with family emberss and relate this to self-image and attitudes.
	2.3 List the responsibilities of family members to the family unit, the school, and the community.
	2.4 Identify stress situations that affect the behavior of family members.
	2.5 Name the stages of the life cycle and described the interests and concerns of individual in these sages.

	2.6 Demonstrate positive methods of interaction with family members, friends and other communiy.
3. Personal and family values, goals and resources.	3. Name personal and family values, goals, and resources and use of these when replacing decisions.
	3.1 Define values, goals and resources.
	3.2 Name personal and family values and goals and explain how they have enjoyed.
	3.3 List the steps in the decision process and describe how decisions are affected ny individual and family values, goals, and resources.
	3.4 Use the decision making process to determine possible action action revelaed to a personal family concern.

Food and Nutrition

1. Nutritional needs.	1. Identify the nutritional needs of the body. 1.1 List and explain the classes of nutrients. 1.2 Match nutrients and their functions. 1.3 Identify food sources of the various nutrients. 1.4 Explain the relationship between health and nutrition.
2. Functions of food, food choices and habits.	2. Discuss the functions of food and how food attitudes, choices and habits are developed. 2.1 List the reasons that people eat. 2.2 List and describe examples of religions, ethnic and regional food customs. 2.3 Explain how technology is related to the foods people eat. 2.4 Explain the terms of diet, exercies, weight control and calorie. 2.5 List and explain the Basic Four Groups/Daily Food Guide. 2.6 Plan and/or demonstrate the preparation of well-balanced meals and snacks. 2.7 List food myths.

2.8 Describe time, energy and cost factors related to meal preparation.

2.9 Describe effects of aesthetic principles of meal planning on food appeal.

3. Safety and sanitation.

3. Define and demonstrate safety and sanitation techniques critical to good preparation and storage.

3.1 Discuss ways to store and prepare foods safely.

3.2 Demonstrate safe methods of preparation and cleanliness in the lab.

3.3 Read and interpret labels on the manufacturers suggested use of related to safety and sanitation.

3.4 Evaluate lab procedures retaed to safety and sanitation.

3.5 Identify possible emergency situations and procedures to follow.

4. Food preparation.

4. Identify and demonstrate the managerial steps in food preparation and storage.

4.1 Identify the various parts of a recipe.

4.2 Plan job task assignments with lot partners.

4.3 Demonstrate a knowledge of abbreviations nd food preparation terms.

Food preparation cont'd.	4.4 Identify correct use of measuring, mixing, preparing, cooling and baking equipment. 4.5 Demonstrate correct measuring techniques for both liquid and dry ingredients using standard and liquid measurements. 4.6 List procedures to follow when working in the foods lab in school. 4.7 Describe small and large appliances used in the lab. 4.8 Evaluate food preparation procedures and products.
5. Food selection.	5. Discuss the importance of food selection as it relates to our cultural, social and economic conditions. 5.1 Name and describe different types of food service. 5.2 List guidelines to follow when setting the table. 5.3 Explain accepted table manners of various cultures and their purposes. 5.4 Name some food specialities that are popular in different regions of the United State and other parts of the world.

5.5 Describe the effects of climate and transportation on food availability.

5.6 Discuss world food problems and programs available to help people obtain better nutrition.

Housing, Home Furnishings and Equipment

1. Shelter/differing cultures.	1. Describe the shelter of different cultures and relate this to the environment, economic conditions, and technological advances. 1.1 Define basic terms related to housing. 1.2 Identify different types of shelter and describe how the structures were influenced by environmental and economic conditions and technological advances.
2. Functions of Housing.	2. Relate the functions of housing to the basic needs of individuals. 2.1 List the physical, social and emotional needs of human beings and identify ways in which housing can meet these needs. 2.2 Explain how housing needs are related to stages of the life cycle and different family structures. 2.3 Identify housing features that fulfill personal needs and interests. 2.4 Explain the difference between a house and a home.
3. Sources of energy in the home.	3. Identify energy sources, home equipment which uses this energy, and purposes for energy conservation. 3.1 List the renewable and non-renewable sources of energy.

	3.2 Match the energy-using equipment in the home with its energy source. 3.3 Formulate a plan to conserve energy in the home environment.
4. Need for personal living space.	4. Explain how the organization of personal living space provides a setting for individual development and social interaction. 4.1 Identify furnishings and accessories which enhance personal living space. 4.2 Identify storage techniques for personal possessions and devise a plan for organizing personal property. 4.3 Describe responsibilities of family members in maintaining a clean and orderly home environment. 4.4 Devise a plan for cleaning and maintaining their personal space.
5. Safe environment.	5. Describe a safe environment for personal and family living. 5.1 Recognize the safety hazards that can exist in the home environment. 5.2 Describe and/or demonstrate methods of accident prevention in the home.

Home Management

1. Decision-making process.	1. Describe and discuss the decision-making process.
	1.1 Identify different styles of decision-making.
	1.2 List and explain steps in the decision-making process.
2. Resources for individuals and families.	2. Identify and review human and material resources available to individuals and families.
	2.1 List different kinds of resources.
	2.2 Identify and discuss examples of personal resources.
	2.3 Describe time, energy and money management.
	2.4 Define the terms dual role, homemaker, and wage earner and identify the responsibilities of each.

3. Family decisions and goals.

3. Recognize and discuss that family decisions reflect goals and goal achievement and vary as do the families themselves.

   3.1 Cite examples of short range and long range goals.

   3.2 Explain how attainment of short range goals contributes to the achievement of long range goals.

   3.3 List examples of decisions which families make regarding household management.

   3.4 Identify reasons why family goals may or may not be achieved.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
(CONSUMER AND HOMEMAKING EDUCATION)
20.0106 Family/Individual Health

20.0106 Family/Individual Health -- an instructional program that prepares individuals to understand the related aspects of health in family living with special emphasis on nutrition, emotional health, and physical health; the relationship of the health of an individual to the well-being of the family; the prevention of illness; and the basic care of the ill and convalescent in the home, including the elderly, the young child, and the handicapped.

Program Objective		Standard of Student Expectation
The program will provide instruction in:		The student will be expected to:
1. Using the decision making process.	1.1	Identify basic physical, emotional, intellectual and social needs.
	1.2	Describe ways of meeting basic human needs of individuals, families and groups.
	1.3	Analyze factors that influence personal values and goals.
	1.4	Describe conflicts in values and goals that may arise as an individual assumes different roles.
	1.5	Describe processes for clarifying values and goals.
	1.6	Clarify personal values and goals.
	1.7	Identify types of health decisions made by individuals and families.
	1.8	Identify the basic steps in making decisions.

2. Managing human resources.	2.1	Identify the tasks that maintain or improve the quality of homelife.
	2.2	Assess interests and abilities of family members.
	2.3	Identify possible divisions of labor to accomplish family tasks.
	2.4	Apply principles of management to the allocation of available human resources.
3. Using community resources.	3.1	Describe physical and mental services provided by community agencies and organizations.
	3.2	Describe consumer services provided by community agencies and organizations.
	3.3	Describe social services provided by community agencies and organizations.
	3.4	Describe family services provided by community agencies and organizations.
	3.5	Investigate procedures to obtain community services to meet health needs.
4. Examining rights and responsibilities.	4.1	Identify basic consumer rights in purchasing and using goods and services.
	4.2	Identify basic consumer responsibilities in purchasing and using goods and services.
	4.3	Identify basic financial and legal rights related to the home and family.

4.4 Identify basic financial and legal responsibilities related to the home and family.

4.5 Explain federal, state and local laws that protect consumer rights.

4.6 Investigate sources of consumer information and protection.

4.7 Explain individual responsibilities in planning families.

4.8 Resolve family and consumer problems using appropriate procedures and agencies.

5. Exploring employment opportunities and requirements.

5.1 Identify career opportunities in home economics occupations related to health.

5.2 Describe skills, job requirements, job openings, career ladders and advancement possibilities for home economics related occupations.

5.3 Idently opportunities for training in home economics related occupations.

5.4 Relate occupations to personal skills, aptitudes and interests.

6. Examining growth and development patterns.

6.1 Describe the stages of physical, emotional, social, intellectual and moral development.

6.2 Examine the influences of heredity and environment on the growth and development of the individual.

7. Maintaining personal health.	7.1	Relate the functioning of body systems to health.
	7.2	Identify physical conditions and symptoms that require medical assistance.
	7.3	Identify the signs and symptoms of common diseases and ailments.
	7.4	Analyze factors affecting the incidence and severity of communicable diseases.
	7.5	Identify diseases for which immunizations are available.
	7.6	Demonstrate techniques of personal cleanliness and sanitation that limit the effects of diseases.
	7.7	Compare the relationship of physical fitness, grooming and appearance to health maintenance.
	7.8	Describe recommended daily dental care and periodic dental and optical care procedures.
8. Maintaining mental health.	8.1	Identify factors that affect personal and family mental health.
	8.2	Explain the relationship between physical health and mental health.
	8.3	Recognize signs of emotional conditions that may indicate a need for professional assistance.

9. Coping with stress and crisis.

9.1 Identify possible sources of stress and crisis.

9.2 Identify positive and negative aspects of stress.

9.3 Describe strategies for reducing or eliminating stress.

9.4 Describe the obligations of family members to maintain a healthy family environment.

9.5 Analyze possible causes and effects of abuse among family members.

9.6 Analyze the consequences of use, misuse and abuse of substances.

9.7 Identify possible alternatives to the use of drugs and other substances.

9.8 Apply coping techniques to situations of stress and crisis.

10. Examining family planning.

10.1 Identify factors that influence family planning decisions.

10.2 Compare contraception techniques and devices.

11. Selecting health care products and services.

11.1 Evaluate the factors that influence the selection of use of health care products and services.

11.2 Investigate possible fraudulent or deceptive health care products and services.

	11.3	Select health care products and services using comparison shopping techniques to meet individual requirements.
12. Establishing nutritional eating patterns.	12.1	Determine factors that might affect th nutritional values of food.
	12.2	Evaluate the effects of food intake on physical and emotional health.
	12.3	Select foods that meet individual health requirements.
13. Relating nutrition to health.	13.1	Assess personal eating patterns in terms of dietary requirements.
	13.2	Evaluate diets based on food facts and fallacies.
	13.3	Plan daily food intake to meet various nutritional needs.
14. Practicing home safety.	14.1	Identify practices and attitudes that contribute to home safety.
	14.2	Describe conditions that create a safe home environment.
	14.3	Apply preventive measures to home conditions that may cause accident or injury.
15. Administering First Aid.	15.1	Identify common home emergencies that may require first aid.

	15.2	Assemble the basic items in a household first aid kit.
	15.3	Apply appropriate first aid procedures for common accidents.
16. Providing health care at home.	16.1	Identify health conditions that may require home care.
	16.2	Demonstrate basic home health care techniques.
	16.3	Identify environmental factors that affect health and human development.
	16.4	Plan activities to maintain or improve the quality of the environment.
17. Vocational student organization membership.	17.1	Participate in a vocational organization.
	17.2	Identify the advantages of participating in vocational student organizations.
	17.3	Participate as a member of a vocational student organization.
	17.4	Participate regularly in chapter meetings and activities at the state and local levels.
	17.5	State the purposes of the organization.
	17.6	Recite the Creed and interpret it.
	17.7	Plan and conduct the Power of One project.

18. Development of leadership skills through VSO and related activities.	18.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and managment skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
(CONSUMER AND HOMEMAKING EDUCATION)
20.0107 Family Living and Parenthood

20.0107 Family Living and Parenthood -- an instructional program that prepares individuals to understand the nature, function, and significance of human relationships within the family/individual units. Includes instruction in the concepts and principles related to various family living conditions; the establishment and maintenance of relationships; and the preparation for marriage, parenthood, and family life. Instruction emphasizes the uniqueness of families and individuals, the development and socialization of the individuals, and meeting the needs and interests of individuals and family members.

Program Objective	Standard of Student Expectation	
The program will provide instruction in:	The student will be expected to:	
1. Using the decision making process.	1.1	Identify basic physical, emotional, intellectual and social needs.
	1.2	Describe ways of meeting basic human needs of individuals, families and groups.
	1.3	Analyze factors that influence personal values and goals.
	1.4	Describe conflicts in values and goals that may arise as an individual assumes different roles.
	1.5	Describe processes for clarifying values and goals.
	1.6	Clarify personal values and goals.
	1.7	Identify types of decisions that are made by individuals and families.
	1.8	Identify the basic steps in making decisions.

	1.9	Analyze factors that influence individual and family decisions.
2. Managing human resources.	2.1	Identify the tasks that maintain or improve the quality of homelife.
	2.2	Assess interests and abilities of family members.
	2.3	Identify possible divisions of labor to accomplish family tasks.
	2.4	Apply principles of management to the allocation of available human resources.
3. Using community resources.	3.1	Describe physical and mental health services provided by community agencies and organizations.
	3.2	Describe consumer services provided by community agencies and organizations.
	3.3	Describe social services provided by community agencies and organizations.
	3.4	Describe family services provided by community agencies and organizations.
	3.5	Investigate procedures to obtain community services to meet individual and family needs.
4. Examining rights and responsibilities.	4.1	Identify basic consumer rights in purchasing and using goods and services.

Examining rights and responsibilities cont'd.	4.2	Identify basic consumer responsibilities in purchasing and using goods and services.
	4.3	Identify basic financial and legal rights related to the home and family.
	4.4	Identify basic financial and legal responsibilities related to the home and family.
	4.5	Examine federal, state and local laws that protect families.
	4.6	Investigate sources of consumer information and protection.
	4.7	Explain individual responsibilities in planning families.
	4.8	Resolve family and consumer problems using appropriate procedures and agencies.
5. Exploring employment orpportunities and requirements.	5.1	Identify career opportunities in home economics related family service occupations.
	5.2	Describe skills, job requirements, job openings, career ladders and advancement possibilities for home economics related occupations.
	5.3	Identify opportunities for training in home economics related occupations.
	5.4	Relate occupations to personal skills, aptitudes and interests.

6. Examining growth and development patterns.	6.1	Describe the stages of physical, emotional, social, intellectual and moral development.
	6.2	Relate patterns of behavior to stages of development.
	6.3	Examine the influences of heredity and environment on the growth and development of the individual.
7. Understanding relationships.	7.1	Identify factors that may produce changes in relationships.
	7.2	Describe ways that interpersonal relationships may fulfill different needs over a period of time.
	7.3	Describe the influence of sex roles in relationships.
	7.4	Explain the responsibilities associated iwth human sexuality.
	7.5	Determine factors that influence the selection of a partner.
8. Assessing family structures and roles.	8.1	Identify functions of the family.
	8.2	Explore the effects of alternative family structures upon family members.
	8.3	Describe the changes in family members tht occur over time.

Assessing family structures and roles cont'd.	8.4	Identify characteristics and stages of the family.
	8.5	Relate the activities of family members to work leisure and community roles.
	8.6	Analyze the effects of changes in family structure brought about by the addition, loss or separation of family members.
9. Examining family planning.	9.1	Explore the factors that may influence the decision to become a parent.
	9.2	Compare contraceptive techniques and devices.
10. Applying parenting skills.	10.1	Describe parenting functions that may be performed by family members and others.
	10.2	Demonstrate parenting strategies that contribute to total family development.
	10.3	Identify strategies that meet the needs of families with exceptional children.
11. Coping with stress and crisis.	11.1	Analyze the impact of stress on family members.
	11.2	Describe strategies for resolving conflicts among family members.
	11.3	Analyze possible causes and effects of abuse among family members.
	11.4	Analyze the consequences of use, misuse and abuse of substances.

	11.5	Apply coping techniques to situations of stress and crisis.
12. Vocational student organization membership.	12.1	Participate in a vocational organization.
	12.2	Identify the advantages of participating in vocational student organization.
	12.3	Participate as a member of a vocational student organization.
	12.4	Participate regularly in chapter meetings and activities at the state and local levels.
	12.5	State the purposes of the organization.
	12.6	Recite the Creed and interpret it.
	12.7	Plan and conduct the Power of One project.
13. Development of leadership skills through VSO and related activities.	13.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
CONSUMER & HOMEMAKING EDUCATION
20.0108 Food & Nutrition
Level 1

20.0108 Food and Nutrition -- an instructional program that prepares individuals to understand the principles of nutrition; the relationship of nutrition to health and well-being; the selection, preparation, and care of food; meal management to meet individual and family food needs and patterns of living; good economics and ecology; and optimal use of the food dollar.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to;
1. Food choices and patterns.	1. Recognize that one's food choices and food patterns result from one's own personal experiences, and societal influences. 1.1 List reasons, other than hunger, why people eat. 1.2 Analyze personal food preferences and practices. 1.3 Describe family situations and occasions when food plays a major role. 1.4 Describe how foods are used to fulfill psychological needs. 1.5 List ways that food serves as a socializer. 1.6 Identify food customs related to cultural heritage. 1.7 Describe foods common to different parts of the world.

1.8 List the geographical regions of the U.S. and name foods common to each region that can be traced to the early settlers of the region.

1.9 Prepare a food associated with each region of the U.S.

1.10 Plan, prepare and serve a meal representative of a foreign country and describe its significance.

1.11 Identify cooking terms and equipment associated with foreign or ethnic cooking.

2. Safety and sanitation.

2. Practice safety and sanitation in food handling.

2.1 List ways through which food becomes contaminated.

2.2 Describe practices for sanitizing the kitchen area correctly.

2.3 Demonstrate proper storage and/or refrigeration of specified food items.

2.4 Prepare different types of food items for storage utilizing acceptable storage containers and materials and explain why each was used.

2.5 Identify safety precautions.

	2.6 Describe work hazards to avoid in the kitchen.
3. Equipment.	3. Identify small and large equipment used in the kitchen and associate the equipment with the specific task that is to be performed.
	3.1 Identify pieces of small equipment used in food preparation; demonstrate their proper use, care, and storage.
	3.2 Demonstrate use and care of large equipment in the kitchen, including a gas and/or electric range and oven.
	3.3 Select the proper equipment for specific tasks to be performed.
	3.4 Select the large and small equipment needed to prepare the meal from a given menu.
4. Measuring.	4. Demonstrate measuring techniques in food preparation.
	4.1 Identify measuring equipment.
	4.2 Identify abbreviations and equivalents.
	4.3 Demonstate measuring skills.
5. Using a recipe.	5. Demonstrate recipe usage in food preparation.
	5.1 Identify parts of a recipe.

5.2 Define cooking terms.

5.3 Adjust a standardized recipe.

5.4 Prepare a food item given a recipe.

6. Diet and physical health.

6. Explain the relationship of diet and physical health and well-being.

6.1 Identify functions of food that influence personal health, appearance, and growth.

6.2 Indicate the energy-producing nutrients and list sources of these nutrients.

6.3 List vitamins and minerals and indicate sources of them.

6.4 List organs which are part of the digestive process.

6.5 Identify the Basic Four Food groups and categorize foods according to these groups.

6.6 Analyze those foods in daily diets which contribute "empty" calories.

6.7 Calculate average caloric intake.

6.8 Select snacks that contribute to nutritional needs.

6.9 Identify the nutritional and health risks associated with different food patterns.

6.10 Explain why a diet composed of a variety of foods is desirable.

6.11 Analyze personal nutrition and food patterns; identify problems, and initiate action to correct these problems.

6.12 List practices that promote good dental health.

7. Nutritional contribution of food.

7. Explain the nutritional contribution of the four food groups to one's diet and select and prepare foods from each group.

7.1 Identify the types of food and amounts needed each of the Basic Four Food groups.

7.2 List the main nutrients supplied to the body by foods in ech of the Basic Four Food groups.

7.3 List nutrients supplied to the body by foods in the "other" category.

7.4 Categorize the foods eaten during a specific period into the Basic Four Food groups and analyze dietary habits.

7.5 Create simple meals meeting acceptable nutritional requirements and basic cooking principles and techniques.

8. Career opportunities in the Food industry.	8. Explore future career opportunities in the food industry. 8.1 List as many businesses as possible in the greater community that are involved in the production, processing or service of food. 8.2 Identify positions from the local newspaper's classified section that require some training and/or knowledge of foods or nutrition.
9. Standards for serving food.	9. Utilize acceptable standards for serving food appropriately in a variety of social settings. 9.1 Demonstrate correct table settings for serving meals family-style, buffet, and other special settings. 9.2 Demonstrate appropriate manners for family meals and special occasions.
10. Vocational student organizations membership.	10.1 Identify the advantages of participating in vocational student organizations. 10.2 Participate as a member of a vocational student organization. 10.3 Participate regularly in chapter meetings and activities at the state and local levels. 10.4 State the purpose of the organization.

	10.5	Recite the Creed and interpret the Creed.
	10.6	Plan and conduct the Power of One project.
11. Development of leadership skills through VSO and related activities.	11.1	Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

1. Influences on Food Choices.

1. Define the ways in which values and nutritional goals fluence food choices.

   1.1 Describe a variety of eating patterns by which nutritional needs can be met.

   1.2 Select an adequate diet based on nutrient criteria when given limited food resources.

   1.3 Associate the lack of specific nutrients with the resultant dietary diseases.

   1.4 Summarize the U.S. dietary goals and explain the need for each one as related to health, fitness and well-being.

   1.5 Recognize present societal attitudes toward body size; identify causes of overweight and investigate ways of controlling weight.

   1.6 Plan a food and activity pattern which results in a desirable body weight.

   1.7 Interpret nutritional information on food packages or labels and evaluate the contents.

   1.8 Evaluate food and nutrition claims on a logical and nutritionally informed basis.

   1.9 Evaluate food fads and fallacies and identify items of food misinformation.

2. Purchasing Food.

2. Demonstrate the ability to purchase foods according to their nutritional values, anticpated use and available resources.

   2.1 List grocery shopping practices that, if followed, will result in consumer and producer satisfaction.

   2.2 Evaluate various forms of a product for appearance, taste, nutrient content, cost and convenience.

   2.3 Analyze budgeting patterns and buying practices in management of the food dollar.

   2.4 Compare and evaluate convenience foods with similar foods prepared "from scratch" for taste, cost, preparation time and appearance.

   2.5 Identify the focus of food advertisements and the age or interest groups to which each advertisement appeals.

   2.6 Evaluate food packages based on information contained on them and visual appeal.

   2.7 Select quantities and determine the forms of food to be purchased based on budget and storage availability.

3. Role of federal government in food purchasing and use.	3. Analyze the role of the federal government in its activities to help and protect consumers; define the rights and responsibilities of consumers. 3.1 Explain how laws and regulations protect the consumer. 3.2 List and demonstrate consumer rights and responsibilities related to food purchases. 3.3 Identify governmental agencies that are involved in consumer protection related to food purchasing and service. 3.4 Explain techniques for obtaining the most efficient use of th electric and/or gas appliances in the kitchen.
4. Food selection and purchasing.	4. Explore management techniques basic to selecting and purchasing food wisely, exercising skills involved in using time, energy, and money wisely. 4.1 Identify the major resources for completing a task and apply them to a work and time schedule. 4.2 Utilize resources effectively while working in the kitchen. 4.3 Plan meals based on a specified budget using time and labor-saving devices.

Food selection and purchasing cont'd.

4.4 List factors that affect food selection purchases.

4.5 Define the effect of lifestyle on meal management.

4.6 Identify ways to reduce time nd energy spent in meal preparation.

4.7 List ways supermarkets encourage consumers to purchase.

4.8 Identify factors, other than price, to consider when purchasing food.

4.9 Demonstrate principles of organization and management for kitchen facilities and equipment.

5. Meal planning principle.

5. Utilize meal planning principles in the planning and preparation of nutritious meals.

5.1 Identify principles of meal planning.

5.2 Prepare foods in a variety of ways to vary calories, cost, color, texture and flavor.

5.3 Plan nutritious meals for a given family situation and period of time.

Meal planning principle cont'd.	5.4 Demonstrate procedures for preparation and storage of foods in each of the four basic food groups; explain the function of these groups in meal planning. 5.5 Modify quanities and utilize ingredient substitutions. 5.6 Demonstrate specialized techniques in the preparation and service of food. 5.7 Use metric measuring equipment correctly.
6. Vocational student organization membership.	6. Participate in a vocational organization. 6.1 Identify the advantages of participating in Vocational student organizations. 6.2 Participate as a member of a Vocational student organization. 6.3 Participate regularly in chapter meetings and activities at the state and local levels. 6.4 State the purposes of the organization. 6.5 Recite and interpret the Creed. 6.6 Plan and conduct the Power of One project.

7. Development of leadership skills through VSO and related activities.

7.1 Demonstrate leadership development in:

a. Social and interpersonal skills.

b. Oral and written communication.

c. Organization and management skills.

d. Civic responsibilities.

e. Parliamentary procedures.

1. Career opportunities in food management.	1.	Explore future career opportunities and the procedures for obtaining a job in the food industry or food management.
	1.1	List job and career opportunities available in food management.
	1.2	Classify and analyze types of food service establishments.
	1.3	Survey the local community for jobs available in food management.
	1.4	Write a letter of introduction.
	1.5	Complete a job application correctly.
	1.6	Compile a resume.
	1.7	Describe a job applicant's role in an interview.
2. Nutritional needs relating to family life cycle stages.	2.	Identify and analyze nutritional needs relating to the stages of the family life cycle.
	2.1	Develop a one-year food time line for an infant in stages and include physical changes at each stage.
	2.2	Identify nutritional needs of the infant and toddler.
	2.3	Identify nutritional snacks for preschool children.

Nutritional needs relating to family life cycle stages cont'd.

2.4 Plan a day's diet for a pre-school child that will be attractive to the child.

2.5 Plan a nutritionally sound day's diet for a school-aged child.

2.6 State the recommended daily dietary allowance for people at each age level.

2.7 List factors that contribute to the nutritional needs of a healthy adult.

2.8 List and describe physical or social factors which influence the elderly diet.

2.9 Outline dietary needs of the pregnant mother and/or the lactating mother.

2.10 List reasons why people fail to eat or overeat.

2.11 Plan a nutritionally sound diet for a person who is under-weight and one who is over-weight.

2.12 Plan a menu for an elderly couple.

2.13 Create nutritionally adequate menus for families or individuals at different stages in the family life cycle (i.e. teenage boy, young married working couple).

3. Menu planning.	3.	Analyze and formulate menu plans for families of various lifestyles that meet their needs.
	3.1	Analyze meals purchased away from home for nutrient content.
	3.2	List factors affecting meal planning.
	3.3	Prepare a menu for a low-budget meal.
	3.4	Identify alternatives for meat in meal planning.
	3.5	Plan menus for nutritious meals that can be prepared in short periods of time.
	3.6	Plan meals for young adults that are nutritionally sound and low-cost.
4. Food management techniques.	4.	Apply management techniques in the preparation and service of meals and special functions.
	4.1	Plan all components of a meal in which guests are present when given a special situation.
	4.2	Identify factors to consider when planning meals or food service for special functions.
	4.3	Demonstrate appropriate variations in table service and appointments for specific purposes and occasions.

4.4 Describe and use the correct etiquette for any given situation.

4.5 Suggest ways to use leftover meat for another meal.

4.6 Demonstrate some "gourmet" techniques with food.

5. Food preservation.

5. Demonstrate principles of home food preservation in preparing food items for storage for future use by the family.

5.1 Identify causes of food spoilage in food preservation.

5.2 Identify benefits of gardening and practice gardening skills in school setting.

5.3 Select and identify pieces of equipment and materials used in food preservation.

5.4 Describe the purpose and procedure for methods of preserving fruits and vegetables.

5.5 Preserve foods by the use of freezing, canning, pickling and jellying.

5.6 Interpret changes in foods and nutrients during preparation and processing.

6. Food related organizations and their role.

5.7 Identify and prepare types of homemade foods that are either traditional and/or suitable to give as gifts.

6. Analyze the role that food plays in the health of individuals, families, communities, and nations; identify the functions of organizations which deal with food-related situations.

6.1 Clarify values regarding policies and techniques for dealing with world hunger.

6.2 Identify federal or international agencies associated with food shortage problems and describe goals and major actions.

6.3 Identify important food sources of other nations and classify them according to food groups and nutritionl contributions.

6.4 Summarize some of the current research in nutrition and use this information to demonstrate the importance of nutritious food selection.

6.5 List and discuss the major nutrition related health problems in the U.S. today.

6.6 Identify available resources in the community to prevent or solve nutrition problems of individuals.

6.7 Identify foods for home and community emergencies.

7. Knowledge of food groups.

7. Adapt theoretical knowledge of the food groups and preparation techniques to practical uses.

7.1 Match dairy products sold in the U.S. with their geographical region or nation of origin.

7.2 Demonstrate thorough knowledge of the concept of nutrient density of foods in the milk product group and suggest ways for an individual to ingest the recommended servings without drinking fluid milk.

7.3 Recommend ways to lower the fat content of foods from the milk products given.

7.4 Identify appropriate serving amounts and methods of preparation for variety meats and meats other than beef.

7.5 Associate some foods from the fruit and vegetable groups as a major food in another country.

7.6 List some fruits and vegetables that have a high vitamin density.

	7.7 List ways to increase protein levels of foods in the grain group and discuss the pros and cons of the enrichment of foods in this group.
8. Vocational student organization membership.	8. Participate in a vocational organization. 8.1 Identify the advantages of participating in vocationl student organizations. 8.2 Participate as a member of a vocational student organization. 8.3 Participate regularly in chapter meetings and activities at the state and local levels. 8.4 State the purposes of the organization. 8.5 Recite the Creed and interpret it. 8.6 Plan and conduct the Power of One project.

9. Development of leadership skills through VSO and related activities.

9.1 Demonstrate leadership development in:

a. Social and interpersonal skills.

b. Oral and written communication.

c. Organization and management skills.

d. Civic responsibilities.

e. Parliamentary procedures.

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CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
20.0109 Home Management
Level I

20.0109 Home Management -- an instructional program that prepares individuals to understand the establishment and maintenance of a satisfying home and family life, including decision making regarding human and non-human resources. Includes instruction in the societal and economic influences on individual and family management; values, goals, and standards; family economics; and the organization of activities in the home as a means of successfully combining the roles of homemaker and wage earner.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Establishing a satisfying home and family life.	1. Explain how values, goals, standards and resources affect the establishment and maintenance of a satisfying home and family life.
	1.1 Define personal values.
	1.2 Identify short term and long term goals.
	1.3 State examples of needs and wants.
	1.4 Identify available resources.
	1.5 Describe the effect of values, goals, standards and resources on a specific life style.
2. Decision-making process.	2. Demonstrate the decision-making process.
	2.1 List the steps in the decision-making process.

	2.4	Evaluate the decision made for specific circumstances.
	2.5	Apply the decision making process to making consumer decisions to meet personal needs and wants.
3. Use of resources.	3.	Illustrate uses for available resources.
	3.1	Define resources.
	3.2	Classify resources.
	3.3	Apply principles of resource use to decisions related to allocation of resources.
	3.4	Assess the effects of the use of resources.
	3.5	Explain ways people can meet the needs and wants with limited resources.
4. Management skills.	4.	Apply principles of management skills.
	4.1	Organize time usage.
	4.2	Prepare an individual spending plan.
	4.3	Recognize energy conservation.
	4.4	Identify human resources.
	4.5	Assess environmental resources.

	4.6 State recycling cost by recycling.
5. The management process.	5. Demonstrate skills in the management process.
	5.1 Explain the role of routine in managing.
	5.2 Devise and use means of implementing plans which include checking, adjusting and facilitating the plans.
	5.3 Evaluate in order to devise means of dividing work to provide optimum development of all persons involved and balance use of resources.
6. The individual as a consumer.	6. Utilize management skills in the analysis of the individual as a consumer.
	6.1 Define consumer rights and responsibilities.
	6.2 Recognize spending patterns.
	6.3 Demonstrate knowledge of buying principles.
	6.4 Identify the opportunity costs of alternative consumer choices.
	6.5 Identify consumer products and practices which are harmful to the environment or the individual.
	6.6 Develop standards to use when judging effectiveness of information attached to the purchased product.

	6.7 Distinguish between product misuse and product failure.
	6.8 Identify the aid and protection offered the consumer.
	6.9 Develop criteria for determining safety features for each of the following types of products: toys, food, clothing, cosmetics.
7. Vocational student organization membership.	7.1 Identify the advantages of participating in vocational student organizations.
	7.2 Participate as a member of a vocational student organization.
8. Devlopment of leadership skills through VSO and related activities.	8. Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Civic responsibilities. d. Parliamentary procedures.

1. The family life cycle: The impact of society.

1. Explain the family life cycle; how it is affected by society; and how the management process can be applied to meet change.

   1.1 Describe the stages in the family life cycle.

   1.2 Determine how different stages in family life cycles and different types of life styles affect and are affected by individual values and goals.

   1.3 Analyze effects of society on the various stages of the family life cycle.

   1.4 Describe how adjustments to goals are needed in order to meet the varying stages of the family life cycle.

   1.5 Identify crises and what might cause them to be less tragic to varying stages of the family cycle.

   1.6 Explain factors preceding a crisis situation and restructure the situation showing the effect of self-motivation and flexibility.

   1.7 Analyze personal management skills and revise activities into a satisfactory order for different life styles.

2. Managing family role resources - The Psychology of human behavior.

2. Demonstrate effective management of family human resources in the stages of the family life cycle.

   2.1 Compare roles of student and adults as carried out in the home and community.

   2.2 Identify family roles traditionally and non-traditionally and/or in different life styles.

   2.3 Analyze family roles behavior which demonstrates avoidance of dislike tasks; explain the decision to accept or change the behavior.

   2.4 Identify and organize traditional and/or non-traditional family activities.

   2.5 Use the democratic methods of group organization and compare its advantages and disadvantages to the authoritative method.

   2.6 Arrange for check points in a one group plan in order to recognize and make changes from the original or traditional procedure.

   2.7 Analyza job related activities and home related activities using time and motion studies and established goals for increased production and efficiently.

	2.8 Construct a job analysis with families of different life styles in which there is represented a variety of stages in the life cycle; evaluate and explain the effectiveness of each member.
3. Family unit management skills.	3. Demonstrate management and decision-making skills in regard to the family unit.
	3.1 Interpret and engage in setting priorities.
	3.2 Interpret basis for decisions in use of resources to meet family needs.
	3.3 Determine short term and long term goals and interpret influence upon each in regard to the family.
	3.4 Identify and explain the purpose of community resources and discuss how each would supplement an individual's income.
4. Financial aspects of various life styles.	4. Analyze financial activities of various life styles and cycles and evaluate.
	4.1 Compare an individual plan for spending with a family's plan for spending.
	4.2 Develop a list of consideration for preparing a plan for spending for a family; analyze priorities.

4.3 Develop a plan for financial protection for oneself or family based on present and future needs in regard to insurance, saving, investment and retirement.

4.4 Explain the effects of economic decisions on the individual, family, community and society.

5. Consumer information.

5. Exercise responsibilities when making rational and influential consumer decisions by obtaining and responding to consumer information.

5.1 Describe the benefits of using consumer information.

5.2 Describe the relationship of basic consumer rights and responsibilities to consumer behavior.

5.3 Evaluate the effects of consumer legislation on the consumer and business/industry.

5.4 Explain the relationship between sound consumer information and purchasing decisions that are satisfactory to both consumer and seller.

5.5 Evaluate different sources of information concerning the selection of a product in regard to the usefulness of the information to a consumer.

6. Vocational student organization membership.	6.1 Identify the advantages of participating in vocational student organizations.
	6.2 Participate as a member of a vocational student organization.
7. Development of leadership skills through VSO and	7. Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Civic responsibilities. d. Parliamentary procedures.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
(CONSUMER AND HOMEMAKING EDUCATION)
20.0110 Housing, Home Furnishings and Equipment

20.0110 **Housing, Home Furnishings and Equipment** -- an instructional program that prepares individuals to understand the physical, psychological, and social influences pertaining to complex housing decisions required for creating a desirable living environment. Includes instruction in the human and environmental factors influencing the form and use of housing; the varied types of housing; costs; exterior and interior design; home furnishings and equipment; and the selection, use, and care of available resources for achieving improved living space to meet individual and family needs.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Using the decision making process.	1.1 Identify basic physical, emotional, intellectual and social needs.
	1.2 Describe ways of meeting basic human needs of individuals, families and groups.
	1.3 Analyze factors that influence personal values and goals.
	1.4 Describe conflicts in values and goals that may arise as an individual assumes different roles.
	1.5 Describe processes for clarifying values and goals.
	1.6 Clarify personal values and goals.
	1.7 Identify types of shelter decisions that are made by individuals and families.

2. Managing human resources.	2.1	Identify the tasks that maintain or improve the quality of homelife.
	2.2	Assess interests and abilities of family members.
	2.3	Identify possible divisions of labor to accomplish family tasks.
	2.4	Apply principles of management to the allocation of available human resources.
3. Using community resources.	3.1	Describe consumer services provided by community agencies and organizations.
	3.2	Describe social services provided by community agencies and organizations.
	3.3	Describe family services provide by community agencies and organizations.
	3.4	Investigate procedures to obtain community services to meet shelter needs.
4. Examining rights and responsibilities.	4.1	Identify basic consumer rights in purchasing and using goods and services.
	4.2	Identify basic consumer responsibilities in purchasing and using goods and services.
	4.3	Identify basic financial and legal responsibilities related to the home and family.

	4.4	Examine federal, state and local laws that protect consumer rights.
	4.5	Investigate sources of consumer information and protection related to shelter.
	4.6	Resolve family and consumer problems using appropriate procedures and agencies.
5. Exploring employment opportunities and requirements.	5.1	Identify career opportunities in home economics occupations related to housing and home furnishings.
	5.2	Describe skills, job requirements, job openings, career ladders and advancement possibilities for home-economics-related occupations.
	5.3	Identify opportunities for training in home-economics-related occupations.
	5.4	Relate occupations to personal skills, aptitudes and interests.
6. Selecting shelter.	6.1	Determine factors that may influence housing selections.
	6.2	Identify factors that determine interior and exterior structural quality.
	6.3	Compare home ownership to rental.
7. Obtaining shelter.	7.1	Compare various methods of financing the purchase of a home.

	7.2	Identify sources of financial assistance for obtaining shelter.
	7.3	Compare agencies and programs that provide assistance in obtaining shelter.
	7.4	Interpret credit agreements.
8. Applying buying practices.	8.1	Describe possible effects of advertising and marketing techniques upon consumers.
	8.2	Identify misleading and deceptive advertising and marketing practices.
	8.3	Interpret the information provided on product labels.
	8.4	Compare various retail outlets.
	8.5	Analyze various types of seasonal and special sales.
	8.6	Compare, maintenance, repair, costs of consumer goods.
	8.7	Analyze the positive and negative aspects of comparion shopping.
	8.8	Apply comparison shopping procedures to the purchase of home furnishings.

9. Selecting furniture and accessories.	9.1	Determine factors that may influence the selection of furniture and accessories.
	9.2	Coordinate furniture and accessories using design elements and principles.
	9.3	Select furniture and accessories for housing situations.
10. Operating and maintaining equipment and appliance.	10.1	Determine factors that may influence the selection of equipment and appliances.
	10.2	Describe time, money and energy-saving techniques in operating equipment and appliances.
	10.3	Operate home equipment and appliances.
	10.4	Apply routine maintenance procedures to home equipment and appliances.
11. Selecting floor, wall and window treatments.	11.1	Determine factors that may influence the selection of floor, wall and window treatments.
	11.2	Demonstrate basic care procedures for floor, wall and window treatments.
	11.3	Select floor, wall and window treatments for housing situations.

12. Making home repairs and improvements.	12.1	Identify routine home maintenance tasks.
	12.2	Analyze skills, time and cost required to make specific home repairs.
	12.3	Obtain estimates for common home improvements.
13. Practicing home safety.	13.1	Identify practices and attitudes that contribute to home safety.
	13.2	Describe conditions that create a safe home environment.
	13.3	Correct home conditions that may cause accident or injury.
14. Protecting the environment.	14.1	Identify environmental concerns that effect health and human development.
	14.2	Identify environmental concerns that may affect shelter choices.
	14.3	Plan activities that maintain or improve the quality of the environment.
15. Vocational student organization membership.	15.1	Identify the advantages of participating in vocational student organizations.
	15.2	Participate as a member of a vocational student organization.

16. Development of leadership skills through VSO and related activities.

16. Demonstrate leadership development in:
    a. Social and interpersonal skills.
    b. Oral and written communication.
    c. Civic responsibilities.
    d. Parliamentary procedures.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
(OCCUPATIONAL HOME ECONOMICS)
20.0201 Child Care and Guidance Management and Services
Level I

20.0201 Child Care and Guidance Management and Services, General -- an instructional program that generally prepares individuals for occupations in child care and guidance, foster care/family day care, and teacher assistance, often under the supervision of professional personnel. Includes instruction in child growth and development; nutrition; program planning and management; safety and behavior guidance; recreational and play activities; child abuse and neglect; parent-child personal relationships; learning experiences for children; interpersonal relationships; and laws, regulations, and policies relating to child-care services and maintenance of children's environment.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Career opportunities related to child care services.	1. Identify career opportunities, requirements, and characteristics related to child care services. 1.1 Identify child care careers using the State Occupational Information Coordinating Committee (SOICC), the Dictionary of Occupational Titles (DOT), and other current community resources. 1.2 Identify rules and regulations using the Department of Social Services rules and regulations to observe in a child care setting. 1.3 Identify community resources which could assist in the child's development. 1.4 Identify requirements to function as a foster parent or adopting parent.

	1.5 Identify characteristics of exceptional people using a variety of resources.
2. Activities for young children.	2. Plan and present growth and development projects and activities for young children, prenatal school-age.
	2.1 Identify genetic and environmental impacts on prenatal development.
	2.2 Explain prenatal stages of development from conception through the birth process.
	2.3 Identify the needs of an infant using a variety of growth development resources.
	2.4 Plan activities using identified needs for infants and toddlers to organize materials.
	2.5 Present activities to enhance the total development of infants.
	2.6 Design facilities to provide a safe and appropriate environment for infants, preschoolers and school-age children.
	2.7 Identify the needs of a toddler using a variety of growth and development resources.
	2.8 Present activities using a developed plan to enhance the total development of toddlers.

	2.9	Identify the needs of preschoolers and school age children using a variety of growth and development resources.
	2.10	Plan activities using identified needs of preschool and school age children to organize materials.
	2.11	Present activities using a developed plan to enhance the total development of a preschooler and school age children.
3. Guidance and discipline techniques for young children.	3.	Describe discipline and guidance techniques to be utilized while caring for young children.
	3.1	Demonstrate appropriate communication skills to facilitate positive working relationships with co-workers and children.
	3.2	Identify inappropriate behavior using a knowledge of child development to implement limits with children.
	3.3	Dramatize behavior to enhance children's self-control, self-esteem, self-direction, and cooperation.
	3.4	Identify limits to aid children at each age in learning appropriate and inappropriate behavior.
4. Techniques for working with children.	4.	Utilize management, discipline, and guidance techniques suitable to the levels of children's development in the center.

4.1 Take attendance and do a health check for each child daily, recording any problems.

4.2 Supervise free play time indoors and outdoors.

4.3 Keep periodic observations and evaluations on each child for records.

4.4 Keep materials, equipment and supplies in order.

4.5 Answer the phone and take routine messages; converse with parents in an appropriate manner.

4.6 Identify and practice positive guidance techniques in communicating with children.

4.7 Write, plan and demonstrate a program for various activities.

4.8 Evaluate activities in terms of accomplishing objectives related to guiding and disciplining children.

5. Vocational student organization membership.

5. Participate in a vocational organization.

5.1 Identify the advantages of participating in vocational student organization.

5.2 Participate as a member of a vocational student organization.

	5.3 Participate regularly in chapter meetings and activities at the state and local levels.
	5.4 State the purposes of the organization.
	5.5 Recite the Creed and interpret it.
	5.6 Plan and conduct the Power of One project.
6. Development of leadership skills through VSO and related activities.	6. Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

1. Program for young children.

1. Organize activities and program for young children, using available resources and knowledge of child development.
    - 1.1 Plan activities using a lesson plan model and resources to organize materials and activities.
    - 1.2 Use available resources to implement a developed plan for activities.
    - 1.3 Present activities using prepared lesson plans and materials to teach a variety of skills.
    - 1.4 Plan schedules using a knowledge of child development and the facility's time frame to implement in a child care setting.
    - 1.5 Plan a bulletin board using a variety of resources and a knowledge of child development.
    - 1.6 Plan and present language activities using a variety of methods and resources to enhance the communication skills of children.
    - 1.7 Prepare and present prereading activities using available resources.
    - 1.8 Present creative activities to assist children in expressing themselves.

1.9 Prepare and present problem solving activities to teach children how to make decisions.

1.10 Prepare and present positive self-image activities to enhance the children's awareness of themselves.

1.11 Prepare and present sensory activities to assist children in being aware of the world around them through their senses.

1.12 Prepare and present motor coordination activities to assist children in their total physical development.

1.13 Prepare and present cognitive activities to teach children basic skills they need.

1.14 Prepare and present self-help activities to teach children skills to be independent.

1.15 Prepare and present musical activities to motivate children to express themselves.

1.16 Prepare and present science activities to assist children in learning about the world around them.

1.17 Plan and present non-sexist activities to assist children in being aware of their human potential in all areas of curriculum.

1.18 Plan and implement a field trip to enhance children's awareness of their community.

1.19 Prepare and present social studies activities to assist children in learning about people and community around them.

2. Safe environments for children.

2. Use health and safety procedures to maintain a safe environment for young children.

2.1 Identify safety hazards using the environment and a knowledge of child development to correct the hazards.

2.2 Correct safety hazards using areas identified and available resources to maintain a safe environment for children.

2.3 Identify causes and effects using available resources to understand child abuse and neglect.

2.4 Identify procedures using available resources from protective services to report suspected child abuse.

2.5 Identify symptoms of common illnesses using guidelines from the Health Department to determine appropriate action.

2.6 Utilize procedures and available resources to care for children with common illnesses.

	2.7 Identify basic first aid procedures to care for an injured child.
	2.8 Conduct emergency drills using facility procedures to direct children to safety.
	2.9 Clean facilities.
	2.10 Identify procedures to assist a child in cleanliness and toileting.
	2.11 Supervise children during rest or nap times to ensure their well being and safety.
3. Food service.	3. Provide food service activities for young children.
	3.1 Plan menus using a knowledge of nutrition to enhance a child's well-being.
	3.2 Implement eating time and a knowledge of child development to assist children in becoming independent.
	3.3 Practice personal sanitary and safety habits.
4. Techniques suitable for children's development.	4. Utilize management, discipline, and guidance techniques suitable to the levels of children's development in the center.
	4.1 Take attendance and do a health check for each child daily, recording any problems.

4.2 Supervise free play time, indoors and outdoors.

4.3 Keep observation and evaluation records for each child.

4.4 Keep materials, equipment, supplies in order.

4.5 Answer the phone, take routine messages; converse with parents in an appropriate manner.

4.6 Identify and practice positive guidance techniques in communicating with children.

4.7 Evaluate activities in terms of accomplishing objectives related to guiding and disciplining children.

5. Child care opportunities.

5. Explore child care opportunities and facilities in the community.

5.1 Examine career opportunities in child care within the community.

5.2 Describe characteristics and responsibilities of child care workers.

5.3 Evaluate personal skills and interests in relation to specific career goals.

	5.4 Identify places for further education and/or training.
	5.5 Identify and visit a variety of child care facilities and sources of funding.
	5.6 Investigate personnel requirements for different facilities within the community.
	5.7 Describe typical equipment and arrangements of different child care facilities.
6. Vocational student organization membership.	6. Participate in a vocational organization.
	6.1 Identify the advantages of participating in vocational student organization.
	6.2 Participate as a member of a vocational student organization.
	6.3 Participate regularly in chapter meetings and activities at the state and local levels.
	6.4 State the purposes of the organization.
	6.5 Recite the Creed and interpret it.
	6.6 Plan and conduct the Power of One project.

7. Development of leadership skills through VSO and related activities.	7. Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

1. On-the-job training.	1.	Demonstrate skills in working in a child care facility.
	1.1	Determine and follow policies of assigned center (local nurseries, preschools, day care centers, elementary schools, etc.).
	1.2	Take part in planning meetings and inservice sessions.
	1.3	Plan and direct daily scheduled activities as appropriate.
	1.4	Teach small groups or individuals in curriculum areas as directed.
	1.5	Practice desirable working and employee habits.
	1.6	Participate in discussions of children's needs, seeking guidance from co-op teacher and parents when problems arise.
	1.7	Use appropriate techniques in attending to infants or children with special needs.
	1.8	Observe, record, and report child behavior in objective ways.
2. Operation of a child care center.	2.	Perform clerical activities related to operating a child care facility.
	2.1	Demonstrate proper telephone etiquette using a facility telephone to assist a caller.

	2.2	Take messages to process information for employer and/or employees.
3. Procedures used by licensed operators.	3.	Demonstrate the procedures used by licensed (child care) operators.
	3.1	Identify requirements using Department of Social Services resources to function as a licensed child care operator.
	3.2	Complete forms designated by the Department of Social Services to apply for a license to be a licensed operator.
	3.3	Gather information to complete all forms required concerning children to be a licensed operator.
	3.4	Identify bookkeeping system to maintain records as a licensed operator.
	3.5	Implement bookkeeping system to maintain records of all income as a licensed operator.
	3.6	Identify types of insurances to operate a licensed center.
4. Employment in the child care field.	4.	Use the skills necessary to attain employment in the child care field.
	4.1	Identify employment opportunities.

Employment in the child care field cont'd.

4.2 Identify job requirements using health, physical, legal, education, and other occupational information.

4.3 Acquire wage information to determine the approximate entry wages, general wage range, and significant fringe benefits for an occupation.

4.4 Identify significant non-wage job characteristics to determine shift requirements, union affiliation, apprenticeships, occupational hazards, characteristics of work environment, and other significant job factors.

4.5 Explore employment opportunities to describe local, regional, and national employment opportunities for an occupation.

4.6 Analyze career ladder to describe job progression in an occupation.

4.7 Identify personal criteria and skills in decision making needed to chose a job, further training or other alternatives.

4.8 Prepare a resume using personal information to apply for a job.

4.9 Write a letter of application to apply/inquire about a job.

Employment in the child care field cont'd.

4.10 Complete a job application to apply for a job.

4.11 Demonstrate appropriate dress to comply with standards of on-the-job dress and grooming.

4.12 Complete a job interview using communication and interpersonal skills, to become employed.

4.13 Describe personal criteria to identify acceptable job offers.

4.14 Demonstrate interpersonal skills to achieve successful relationships with others.

4.15 Identify sources of continuing education for an occupation using available resources to identify career ladder alternatives.

4.16 Describe job termination procedures in occupational area to leave a particular job.

5. Vocational student organization membership.

5. Participate in a vocational organization.

5.1 Identify the advantages of participating in vocational student organization.

5.2 Participate as a member of a vocational student organization.

5.3 Participate regularly in chapter meetings and activities at the state and local levels.

5.4 State the purposes of the organization.

5.5 Recite the Creed and interpret it.

5.6 Plan and conduct the Power of One project.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
(OCCUPATIONAL HOME ECONOMICS EDUCATION)
20.0301 Apparel, and Textiles Management, Production, and Services

20.0301 Clothing, Apparel, and Textiles Management, Production, and Services, General -- an instructional program that generally prepares individuals for occupations concerned with the entire spectrum of clothing, apparel, and textiles management, production, and services, including but not limited to construction; fabric and fabric care; pattern design; principles in clothing construction and selection; fitting and alterations of ready-to-wear garments; custom tailoring; clothing maintenance; and textiles testing.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Career opportunities.	1. Explore career opportunities in clothing and textile.
	1.1 State qualifications for clothing and textile careers.
	1.2 Describe responsibilities of employers in various clothing textile occupations.
2. Industrial sewing.	2. Demonstrate skills in industrial sewing.
	2.1 Identify equipment needed in industrial sewing.
	2.2 State function of equipment in industrial sewing.
	2.3 Properly use equipment in industrial sewing.
	2.4 Correctly take care of an industrial sewing machine.

	2.5 Identify terms related to industrial sewing machine.
	2.6 Wind bobbin and correctly thread industrial sewing machine.
3. Vocational student organization membership.	3. Participate in a vocational organization.
	3.1 Identify the advantages of participating in vocational student organization.
	3.2 Participate as a member of a vocational student organization.
	3.3 Participate regularly in chapter meetings and activities at the state and local levels.
	3.4 State the purposes of the organization.
	3.5 Recite the Creed and interpret it.
	3.6 Plan and conduct the Power of One project.
4. Development of leadership skills through VSO and related activities.	4. Demonstrate leadership development in:
	a. Social and interpersonal skills.
	b. Oral and written communications.
	c. Organization and managment skills.
	d. Civic responsibilities.
	e. Parliamentary procedures.

1. Fibers and fabrics.	1. Analyze properties and characteristics of fibers and fabrics. 1.1 Identify categories of fibers. 1.2 State the affect of fiber characteristics on fabrics. 1.3 Discuss reaction of various fibers to certain conditions such as light, moisture, temperature and stress. 1.4 Define yarn terms. 1.5 Define fabric terms. 1.6 Identify the location of care labels on garments. 1.7 Read and follow a spot removal chart. 1.8 Identify characteristics of textile finishes.
2. Industrial sewing.	2. Correctly maintain and use and industrial machine. 2.1 Demonstrate how to correctly use and maintain an industrial sewing machine. 2.2 List tasks which are commonly performed on an industrial sewing machine.

	2.3 Demonstrate industrial sewing machine safety.
3. Vocational student organization membership.	3. Participate in a vocational organization.
	3.1 Identify the advantages of participating in vocational student organizations.
	3.2 Participate as a member of a vocational student organization.
	3.3 Participate regularly in chapter meetings and activities at the state and local levels.
	3.4 State the purposes of the organization.
	3.5 Recite the Creed and interpret it.
	3.6 Plan and conduct the Power of One project.
4. Development of leadership skills through VSO and related activities.	4. Demonstrate leadership development in:
	a. Social and interpersonal skills.
	b. Oral and written communication.
	c. Organization and management skills.
	d. Civic responsibilities.
	e. Parliamentary procedures.

5. Labels.	5. Read and understand labels. 5.1 Describe the Textile Fiber Products Identification of 1958. 5.2 State provisions of the Flammable Fabrics Act of 1953. 5.3 State function of permanent care labeling (1972).

1. Customer relations.	1. Establish and maintain good relations with customers. 1.1 Establish and maintain good relations with customers. 1.2 Utilize effective means for letting public know about business. 1.3 Demonstrate courteous and cooperative manners when dealing with customers.
2. Pattern alteration.	2. Design and alter a pattern to ensure customer fit. 2.1 Design or alter a pattern to ensure customer fit of garment. 2.2 Determine work agreements based on accurate judgement of difficulty, time and cost.
3. Garment construction.	3. Use proper techniques to complete a garment. 3.1 Demonstrate the ability to achieve quality in custom sewing thorugh use of appropriate efficient construction techniques. 3.2 Analyze garment for details to fit. 3.3 Accurately adjust a garment to correct fitting problems. 3.4 Use proper techniques to complete garment.

4. Garment repair and maintenance.	4. Extend the life of a garment. 4.1 Demonstrate the ability to extend life of garments through effective repairs. 4.2 Determine price and time needed for making repairs. 4.3 Use appropriate techniques for making various repairs.
5. Garment alterations.	5. Alter a garment. 5.1 Demonstrate how to fit garments on customer to correct fitting problems while maintaining grain of fabric. 5.2 Analyze customer's fitting problems. 5.3 Propose alterations to resolve fitting problems. 5.4 Compute cost of specific alterations. 5.5 Utilize sound business procedures in working with customers.
6. Business practices and principles.	6. Demonstrate skill in business practices and principles. 6.1 Name resources used to locate customer sewing jobs.

	6.2 Describe possible problems in working with customers.
	6.3 Plan a sewing area.
	6.4 Calculate change.
	6.5 Develop a resume.
	6.6 Complete job application.
7. Vocational student organization membership.	7. Participate in a vocational organization.
	7.1 Identify the advantages of participating in vocational student organizations.
	7.2 Participate as a member of a vocational student organization.
	7.3 Participate regularly in chapter meetings and activities at the state and local levels.
	7.4 State the purposes of the organization.
	7.5 Recite the Creed and interpret it.
	7.6 Plan and conduct the Power of One project.

8. Development of leadership skills through VSO and related activities.

8. Demonstrate leadership development in:

   a. Social and interpersonal skills.
   b. Oral and written communication.
   c. Organization and management skills.
   d. Civic responsibilities.
   e. Parliamentary procedures.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
(OCCUPATIONAL HOME ECONOMICS EDUCATION)
20.0401 Food Production, Management and Services
Level I

20.0401 Food Production, Management, and Services, General -- an instructional program that generally prepares individuals in managerial, production, and service skills used in institutional, commercial, or self-owned food establishments or other food industry occupations. Includes instruction in planning, selecting, storing, purchasing, preparing, and serving quantity food and food products; nutritive values; safety and sanitation precautions; use and care of commercial equipment; serving techniques; special diets; and management of food establishments.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. The food service industry.	1. Demonstrate an understanding of the history, outlook and requirements of the food service industry.
	1.1 List the types of food service operations.
	1.2 Explore the impact of the food service industry on the local economy.
	1.3 Identify food service occupations.
	1.4 Identify career ladders in food service.
	1.5 Identify industry, school, and classroom requirements for food service.
	1.6 Explore the history of food and food service.

2. Industry standards and expectations.	2. Investigate attitudes and work ethics in the food service industry. (Industry standards and expectations emphasized).
	2.1 Explain attitudes needed for food service employees.
	2.2 Describe good work ethics needed by food service people.
3. Sanitation.	3. Investigate the basics of sanitation as it applies to the food service industry.
	3.1 Identify how foodborne bacteria are transmitted and how they may be controlled.
	3.2 Identify proper procedures for protecting food preparation and serving.
	3.3 Name the requirements for a safe foodhandler.
	3.4 Demonstrate proper techniques of cleaning and sanitizing.
4. Use and care of tools and equipment.	4. Examine the tools and equipment used in the food industry and how to use and care for them properly.
	4.1 Identify kitchen tools and equipment.
	4.2 Demonstrate proper use of tools and equipment.
	4.3 Demonstrate proper care, and maintenance of tools and equipment.

5. Basic trade terminology.

5. Discuss basic trade terminology and units of measurement.

    5.1 Define basic terms:

        a. Cutting.

        b. Cooking.

        c. Baking.

        d. Food.

    5.2 Demonstrate correct measuring and weighing techniques for volume and weight.

    5.3 Adjust and use a standardized recipe.

    5.4 Recognize abbreviations used in recipes.

6. Basic nutrition and dietary changes.

6. Examine basic nutrition and the dietary changes made necessary by illness.

    6.1 Identify the functions and sources of each of the major nutrients: protein, carbohydrates, vitamins, minerals, and water.

    6.2 Identify and define the basic groups of good nutrition.

    6.3 List and define the dietary guidelines for Americans.

	6.4 Identify health conditions which require dietary modifications.
	6.5 List special dietary needs.
7. Menu planning.	7. Describe the basic types of menus and the components of good menu planning.
	7.1 Define basic menu classifications and terms.
	7.2 Select items for menus based on the components of good menu planning.
	7.3 List and describe factors which will affect the type of menu planned.
8. Fruit and vegetable preparation.	8. Identify common fruits and vegetables and the proper receiving, storing, handling, cooking and serving.
	8.1 Identify fruits and vegetables.
	8.2 Recognize good quality fruits and vegetables when receiving.
	8.3 Demonstrate proper receiving and storing of fruits and vegetables.
	8.4 Demonstrate the cooking of fruits and vegetables.
	8.5 Arrange fruits and vegetables for eye appeal.
	8.6 Evaluate the flavor of fruits and vegetables.

	8.7 Identify the nutritional value of fruits and vegetables.
9. Handling and serving salads.	9. Identify basic types of salads and dressings, the ingredients used, and the proper handling and serving. 9.1 Identify common salads, dressings, and ingredients used in salads and dressings. 9.2 Recognize good quality ingredients used in salads. 9.3 Demonstrate proper receiving and storing of ingredients. 9.4 Demonstrate the proper way to make salads and dressings. 9.5 Evaluate the flavor of salads and dressings. 9.6 Identify the nutritional value of salads and dressings.
10. Using appetizers and garnishes.	10. Identify appetizers and garnishes and their proper use. 10.1 Identify most common types of appetizers and garnishes. 10.2 List the proper use of garnishes. 10.3 Evaluate the taste of appetizers.

10.4 Arrange appetizers and garnishes in a colorful and attractive manner.

10.5 Arrange appetizers and garnishes for serving.

11. Cheese products.

11. Examine types of cheese, and the proper receiving, storing, handling, cooking and serving.

    11.1 Identify most of the common cheeses.

    11.2 Recognize the quality of cheese.

    11.3 Demonstrate proper receivin and storing of cheese.

    11.4 Demonstrate many techniques of cooking with cheese.

    11.5 Analyze the nutritional value of cheese.

12. Sandwich making.

12. Identify common types of sandwiches, the different varieties, and the many types of fillings.

    12.1 Recognize and identify all common sandwiches.

    12.2 Demonstrate the preparation of most sandwiches.

    12.3 Demonstrate the proper handling and storing of sandwiches.

	12.4 Analyze the nutritional value of sandwiches and fillings.
13. Preparing and serving breakfasts.	13. Examine the procedures used when selecting, preparing, and serving breakfast items.
	13.1 Prepare fruits and juices.
	13.2 Prepare breakfast cereals.
	13.3 Identify and prepare common breakfast meals.
	13.4 Prepare quick breads for serving.
	13.5 Mix and prepare pancake, fritter, waffle, and French toast batters.
	13.6 Explain the differences between an American plan and Continental plan breakfast menu.
	13.7 Prepare a breakfast using the American plan menu.
14. Beverages.	14. Identify and prepare common beverages.
	14.1 List and identify common beverages.
	14.2 Demonstrate the proper use and care of beverage equipment.
	14.3 Prepare and serve common beverages.
	14.4 Determine nutritive value of beverages.

15. Egg marketing and use.	15. Examine market forms, storage, preparation, and related use of eggs in food preparations. 15.1 Identify the grades, sizes, market forms, and weights of eggs. 15.2 List the uses of eggs in food preparation. 15.3 Cook eggs using various cooking techniques. 15.4 Design menus using eggs in each portion of the meal. 15.5 Determine the nutritive value of eggs.
16. Yeast and quick breads.	16. Identify and prepare yeast leavened and quick breads. 16.1 Identify the basic baking ingredients and their use. 16.2 Identify various quick breads and their characteristics. 16.3 State the types of batters and doughs used in quick breads and mix each type correctly. 16.4 Evaluate quick breads for quality characteristics. 16.5 List various quick breads. 16.6 List the procedure for making yeast breads.

16.7 Prepare and bake various breads using both the sponge and straight dough methods.

16.8 Recognize common bread faults and their causes.

16.9 Prepare quick breads and yeast breads from frozen doughs and packaged mixes.

16.10 Identify mixing and handling techniques which affect the quality of bread products.

17. Desserts and pastries.

17. Prepare basic desserts and pastries.

17.1 Identify a variety of desserts and pastry products.

17.2 Explain the creaming, two-stage, and sponge methods of cake mixing.

17.3 Weigh, mix, scale, and bake cake batters.

17.4 Explain the function of icings.

17.5 Prepare pie crusts.

17.6 Identify and prepare the main types of pie fillings.

17.7 Explain the creaming and one-stage methods of cookie mixing.

17.8 Identify and prepare each of the classes of cookies.

17.9 Explain the difference between cornstarch, custard, and steamed puddings.

17.10 Prepare puddings from each classification.

17.11 Dissolve gelatins and prepare gelatin based desserts.

1. Meat variety and uses.

1. Describe the major varieties of meats and their uses in the food service industry.
    - 1.1 Identify primal and wholesale cuts of meats.
    - 1.2 Recognize meat identification terms.
    - 1.3 List meat certification terms.
    - 1.4 Explain meat cooking terms.
    - 1.5 Define and demonstrate procedures for moist heat cooking.
    - 1.6 Define and demonstrate procedures for dry heat cooking.
    - 1.7 Identify the various degrees of doneness by various methods.
    - 1.8 Identify the common tenderizing methods.
    - 1.9 List and understand the factors of pork cooking.
    - 1.10 Identify cured and smoked pork products.
    - 1.11 Identify the factors of lamb and veal cooking.
    - 1.12 Describe the nutritional value of meat.

2. Poultry variety and uses.	2. Describe the major varieties of poultry and their uses in the food service industry. 2.1 List common types of poultry. 2.2 List market forms of poultry. 2.3 Name various types of poultry dishes. 2.4 List common classes of poultry. 2.5 State proper storing procedures. 2.6 Identify factors of preparation methods. 2.7 Identify dry methods of poultry cooking. 2.8 Identify moist methods of poultry cooking. 2.9 Cut up a whole chicken. 2.10 Roast a turkey. 2.11 Identify the nutritional values of poultry.
3. Fish and shellfish preparation.	3. Identify and prepare fish and shellfish. 3.1 Identify the various species and characteristics of fish and shellfish. 3.2 Identify fish by fat content.

3.3 List market forms and ways for fish and shellfish.

3.4 Identify common methods of fish and shellfish cookery.

3.5 Prepare fish and shellfish by various methods.

3.6 Identify proper handling and storage methods.

3.7 Identify the nutritional value of fish and shellfish.

3.8 Discuss the impact of aquaculture.

4. Variations of sauces.

4. Investigate common sauces and their variations.

4.1 Identify and prepare a variety of sauces.

4.2 Identify safety procedures for sauces.

4.3 Identify nutritional value of sauces.

4.4 Discuss the history of sauces.

5. Stocks and soups.

5. Examine basic kinds of stocks and soups.

5.1 Identify principles of stock cookery.

5.2 Identify and prepare basic stocks.

	5.3 Identify principles of soup cookery.
	5.4 Identify and prepare basic soups.
	5.5 Identify nutritional value of stocks and soups.
6. Safety and first aid principles.	6. Examine basic principles of safety and first aid and their application to the individual, co-worker, customer, and work place.
	6.1 Identify common hazards associated with food service and state measures of prevention.
	6.2 Identify and locate all safety devices and demonstrate proper use.
	6.3 Demonstrate correct emergency first aid for accidents.
7. Sanitation.	7. Investigate the basics of sanitation as it applies to the food service industry.
	7.1 List the basics for the purchasing and storing of safe food.
	7.2 List proper procedure for pest control.
	7.3 Design a program for managing a sanitary food service.
	7.4 List sanitation regulations and standards.

	7.5 Define food service sanitation terminology.
8. Menu planning.	8. Examine the absic types of menus and the components of good menu planning. 8.1 Design a menu in order of service with descriptions where necessary. 8.2 Identify the requirements of planning a school lunch menu.
9. Food cost control.	9. Investigate basic techniques of controlling food costs and costing out recipes. 9.1 Identify and explain cost control factors. 9.2 Define portion control and describe how it relates to cost control. 9.3 Cost out recipes and compute a menu price utilizing a standard food cost percentage.
10. Food purchasing and storage.	10. Examine the basic skills of purchasing, receiving, and storing of food and beverages used in a food service establishment. 10.1 Describe steps in the food purchasing process. 10.2 Identify and correctly use the following forms: purchase orders, receiving logs, and inventory sheets.

	10.3 Explain proper storage procedures and temperature control for all goods received.
11. Food industry service.	11. Investigate the service area of the food industry.
	11.1 Serve customers with pride and efficiency.
	11.2 Perform the duties of the dining room attendant.
	11.3 Perform the duties of a waiter/waitress.
	11.4 Perform the duties of a cashier.
	11.5 Perform the duties of a host/hostess.

1. Job applications.	1. Examine procedures to be followed when applying for a job.
	1.1 Complete an application form.
	1.2 Recognize the importance of proper grooming and dress.
	1.3 Write a letter of introduction (cover letter).
	1.4 Write a resume.
	1.5 Participate in a mock interview.
	1.6 Write a follow-up thank you letter.
2. Personal financial management.	2.1 Compute wages and payroll deductions.
3. On-the-job training.	3. Practice acquired skills in a co-operative work experience.
	3.1 Identify possible employment in the food service industry.
	3.2 Secure employment in the food service industry.
	3.3 Exhibit the following attributes:
	a. Dependability.
	b. Promptness.

c. Initiative.

d. Accuracy.

e. Loyalty.

f. Self-price.

g. Punctuality.

h. Confidentiality.

i. Honesty.

j. Cooperation.

k. Cleanliness of self and work place.

l. Productivity.

m. Communication.

n. Completion of tasks.

o. Positive attitudes and enthusiasm toward the job.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in: a. Social and interpersonal skills. b. Oral and written communication. c. Organization and management skills. d. Civic responsibilities. e. Parliamentary procedures.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
20.0406 Food Service
Level I

20.0406 Food Service -- an instructional program that prepares individuals to select, purchase, prepare, or produce food in quanities; preserve nutritive value of foods; follow standard recipes for quality control; prepare and serve quality foods; receive, store, and issue foods and supplies; select and use commerical equipment for production and services; observe safety precautions and sanitation regulations; store and handle food and equipment; clean food preparation and service areas; take inventories; and work in or manage food-service establishments.

Program Objective		Standard of Student Expectation
The program will provide instruction in:		The student will be expected to:
1. Monitor and store supplies.	1.1	Recognize and separate incoming supplies.
	1.2	Match invoice to goods received.
	1.3	Recognize and handle damaged goods.
	1.4	Store food.
2. Clean and sanitize service area.	2.1	Select appropriate cleaning procedures.
	2.2	Recognize and use chemicals.
	2.3	Clean floors.
	2.4	Monitor dishwashing temperatures.
	2.5	Sanitize tools and equipment.
	2.6	Clean hood and filters.

	2.7	Clean and monitor restrooms.
3. Operate equipment.	3.1	Run dishwasher.
	3.2	Use food disposer.
	3.3	use steam jenny.
	3.4	Operate floor cleaning equipment.
	3.5	Operate other equipment.
4. Implement safety procedures.	4.1	Insure safe storage of supplies.
	4.2	Practice safe procedures in cleaning and sanitizing kitchen and service areas.
	4.3	Handle tools and equipment safely.
	4.4	Recognize and eliminate fire hazards.
5. Demonstrate personal hygiene.	5.1	Bathe daily.
	5.2	Use hair restraints.
	5.3	Keep facial hair well groomed.
	5.4	Clean hands and trim nails.
	5.5	Remove jewelry.
	5.6	Treat and cover cuts and sores.
	5.7	Wear clean uniforms.

6. Perform required employability skills.

6.1 Follow food service policies and procedures.

6.2 Display a positive attitude.

6.3 Cooperate with co-workers.

6.4 Comprehend job specs.

6.5 Follow written and verbal instructions.

6.6 Communicate verbally and in writing.

CONTENT STANDARDS
FOR
VOCATIONAL HOME ECONOMICS
20.0406 Food Service
Level II

20.0406 Food Service -- an instructional program that prepares individuals to select, purchase, prepare, or produce food in quanities; preserve nutritive value of foods; follow standard recipes for quality control; prepare and serve quality foods; receive, store, and issue foods and supplies; select and use commerical equipment for production and services; observe safety precautions and sanitation regulations; store and handle food and equipment; clean food preparation and service areas; take inventories; and work in or manage food-service establishments.

Program Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Comprehend and interpret weights and measures.	1.1 Use weighting devices.
	1.2 Use measuring devices.
	1.3 Convert recipes.
	1.4 Apply portion control.
2. Pre-prepare menu items.	2.1 Identify varieties of food.
	2.2 Interpret culinary terms.
	2.3 Determine "state" of food.
	2.4 Identify herbs and spices.
	2.5 Follow recipes.
	2.6 Clean fruits and vegetables.

	2.7	Store food.
3. Maintain a constant state of readiness.	3.1	Follow a production sheet.
	3.2	Prepare garnishes.
	3.3	Anticipate needs and replenish supplies.
	3.4	Set-up and break down service areas.
4. Use tools and equipment.	4.1	Employ proficient knife skills.
	4.2	Use various hand tools.
	4.3	Operate service equipment.
	4.4	Operate food preparation equipment.
	4.5	Operate food production equipment.
	4.6	Operate steam equipment.
	4.7	Implement safety procedures and principles.
5. Demonstrate personal hygiene.	5.1	Bathe daily.
	5.2	Use hair restraints.
	5.3	Keep facial hair well groomed.
	5.4	Clean hands and trim nails.
	5.5	Remove jewelry.
	5.6	Treat and cover cuts and sores.

5.7 Wear clean uniforms.

6. Perform required employability skills.

6.1 Follow food service policies and procedures.
6.2 Display a positive attitude.
6.3 Cooperate with co-workers.
6.4 Comprehend job specs.
6.5 Follow written and verbal instructions.
6.6 Communicate verbally and in writing.

The program will provide instruction in:	The student will be expected to:
1. Vocational student organization membership.	1.1 Identify the advantages of participating in Vocational student organizations.
	1.2 Participate as a member of a Vocational student organization.
2. Development of leadership skills through VSO and related activities.	2.1 Demonstrate leadership development in:
	a. Social and interpersonal skills.
	b. Oral and written communication.
	c. Organization and management skills.
	d. Civic responsibilities.
	e. Parliamentary procedures.

Equal Educational Opportunity Guidelines

LIBERTY AND INDEPENDENCE

WILLIAM B. KEENE, State Superintendent

THE DELAWARE DEPARTMENT OF PUBLIC INSTRUCTION

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ACKNOWLEDGEMENTS--COMPLIANCE STANDARDS

Human Relations

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Guidelines for Human Relations

The guidelines for Human Relations are designed to foster self-pride, enhance school climate, improve the quality of instruction, and facilitate cognitive development. They are not designed to constitute an isolated course per se; on the contrary, the goal here is to address these objectives in relevant curricular areas (e.g. Social Studies, Mental Health, etc.).

These guidelines are designed for K-12 and should be adapted accordingly. For example, while a K-3 student would exhibit limited behavioral and verbal information to explain problematic home environment and other social conditions (in 2.1), a 9-12 student on the other hand, would discuss intelligently the social and emotional factors (e.g. drugs, problems with stepfather) which may be contributing to a negative behavior.

The teacher should, where appropriate, infuse human relations activities into the lesson plans at the academic level required. Further, the objectives may be checked/reviewed at the end of each month or marking period to ascertain whether the student has "improved" or "needs to improve."

/kf
10/3/84

	5.4 select solution(s).
	5.5 evaluate consequences.
6. listening and feedback development.	6.1 listen and repeat accurately what was said.
7. racial and cultural awareness/acceptance development.	7.1 mingle and work with students of other races/ethnic background.
	7.2 show an awareness of the cultural contributions of many different racial/ethnic groups.
	7.3 appreciate and understand the diversity of dialects/languages and value their use in literature and poetry.
	7.4 recognize and dispel ethnic or racial stereotypes in tests, books etc.
	7.5 discuss and solve interracial/intercultural problems.
	7.6 display a level of understanding and empathy for victims of prejudice and discrimination through role playing, story completion, etc.
	7.7 avoid discriminatory practices against others because of racial, ethnic, religions, social class, handicap or gender status.
8. community/school relations development.	8.1 work with community/school projects as required.
	8.2 demonstrate helping relationship skills in facilitating community/school activities.

DRAFT

Guidelines for Developing Positive Interpersonal Relationships

Enabling Objective

The teacher will facilitate skills in:	The student will be expected to:
1. self-concept/self-perception development.	1.1 identify feelings about self.
	1.2 disclose feelings/information about self.
	1.3 describe and clarify personal attitudes and values.
	1.4 discuss perceptions about "significant others."
2. good discipline/classroom behavior development.	2.1 explore socio-emotional needs.
	2.2 take responsibility for behaving in an acceptable manner.
3. verbal and non-verbal communication development.	3.1 listen, understand and respond with warmth and empathy (develop rapport).
	3.2 smile, show enthusiasm and give other positive signs while communicating with others.
	3.3 provide constructive criticism when disagreeing with others.
4. affective expressions development.	4.1 use positive words such as: wonderful, satisfied, thanks, friendly, please, good ...
	4.2 use phrases such as: You feel ..., It seems that you ..., I'm not sure if I'm with you but ..., Would you buy this idea ..., Could I ask you to ...
5. problem solving development.	5.1 define and understand concerns/problems.
	5.2 explore alternative solutions.
	5.3 review pros and cons.

Sex Equity
Compliance Standards

WILLIAM B. KEENE, State Superintendent

THE DELAWARE DEPARTMENT OF PUBLIC INSTRUCTION

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COMPLIANCE STANDARDS
FOR
SEX EQUITY

Enabling Objective	Standard of Student Expectation
The program will provide instruction in:	The student will be expected to:
1. Fostering the understanding of sex fair language.	1.1 Use inclusive and sex fair language. a. When sex is unspecified (the carpenter or secretary can be a he or she). b. When the antecedent is stereotypical (the steelworker or homemaker can be a he or she). c. When both sexes are being referenced (use chair not chairman). d. When occupational titles are used; mail carrier, fire fighter, etc. e. Through the entire text of the written material and not just at the beginning.
	1.2 Refer to persons holding a non-traditional occupation by job title without regard to gender (use doctor not woman doctor or nurse not male nurse).
	1.3 Use parallel terms when referring to women and men (Senator Kennedy and Prime Minister Thatcher not Senator Kennedy and Mrs. Thatcher).

1.4 Refer to and/or describe women and men referenced together in terms of their accomplishments and/or titles rather than in terms of marital and family status and/or appearance (e.g. Senator Kennedy and Prime Minister not Senator Kennedy and Margaret Thatcher, mother of two).

1.5 Avoid the use of pejorative and/or demeaning synonyms (e.g. jock, babe, chick) in place of the words men and women.

1.6 Recognize that the issue of sex discrimination is unique and different from discrimination related to race and handicapped conditions.

2. Presenting all occupations and/or roles as equally appropriate to male and females.

2.1 Identify all occupations as potential opportunities for both men and women.

2.2 Describe women and men as equally career and family oriented.

2.3 Assign the roles of boss, executive, leader, professional, etc. to women and men. Assign the role of helper, nurturer and parent to men and women.

2.4 Avoid references to sex-linked personality traits (e.g. the foreman, the secretary, not the brusque foreman, the secretary's loving attention to detail).

2.5 Recognize that females and males can be portrayed as possessing wide variety of character, personality, and emotional traits (women and men as sentimental, bossy, vain, capable, aggressive, and/or in control).

2.6 Describe women and men in a variety of roles in the home (women and men cutting grass, caring for children, doing dishes, and repairing the washer).

2.7 Identify instances of female professionals being assisted by men and male professionals being assisted by women.

3. Including the accomplishments and contributions to women.

3.1 Recognize the trend of men and women moving into nontraditional occupations and into new and emerging technologies.

3.2 Identify the significant contributions of women to past and present history and to scientific discoveries.

3.3 Use the works of women from multiethnic, racial and socioeconomic groups in bibliographies.

3.4 Recognize that the sexist attitudes of the past which were accepted are no longer acceptable in the present.

4. Portraying the changing roles of women and men.

4.1 Associate both male and female voices with a variety of occupations.

4.2 Associate the role of a narrator with both men and women.

4.3 Recognize that men and women personify a variety of body types and features.

4.4 Associate women and men with a variety of roles and responsibilities at home and at work.

4.5 use graphics and charts that are genderless or have equal numbers of male and female drawings and figures.

4.6 Identify equal numbers of females and males in references and/or illustrations.

5. Fostering the equal treatment of male and female students in the classroom.

5.1 Identify equal or near equal benefits to be received from the financial resources of the school. (A disproportionate amount of the financial resources of the school should not be awarded to predominantly one sex or the other).

5.2 Choose course offerings and make selections based on individual aptitudes, interests, and abilities.

5.3 Participate in all aspects of the school program and in all groups and athletic activities. (Male and female students as cheerleaders, soccer players and chief club members).

Special Vocational Programs

WILLIAM B. KEENE, State Superintendent

THE DELAWARE DEPARTMENT OF PUBLIC INSTRUCTION

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Vocational Education/Exceptional Children Program

CONTENT STANDARDS
FOR
SPECIAL VOCATIONAL EDUCATION PROGRAMS

PROGRAM OBJECTIVE	STANDARD OF STUDENT EXPECTATION
The program will provide instruction in:	The teacher will be expected to:
1. An individualized vocational education plan as part of the student's total individualized education program.	1.1 Participate in meetings of individualized education program committees.
	1.2 Help to develop the content of the IEP which will include goal(s), objectives, activities, special education and related services, extent of participation in the program, dates for initiating of services, and evaluative criteria and methods.
	1.3 Participate with the Department of Public Instruction in the annual evaluation of the IEP.
2. A vocational assessment prior to and continuing during the student's enrollment in the program.	2.1 Develop a schedule, when applicable, for times to the student.
	2.2 Maintain a record of continuous informal assessments.
	2.3 Assess the students cognitive, effective, and psychomotive domains.
	2.4 Provide a semi-annual and annual assessment of student's progress, strengths, and weaknessess to the IEP committee.
	2.5 Assist in the career and occupational guidance and counseling of the student.

3. Activities and experiences which are related to the instruction and training of the program.	3.1 Adapt or adopt materials and experiences which will enable the student to successfully enroll and perform in the program. 3.2 Provide related classroom instruction in the basic skills of communication, safety, social, science, mathematics, consumer education, independent living skills, and employment seeking skills. 3.3 When appropriate, secure employment training for the student. 3.4 Conduct follow-up studies of employed students and postschool employed students.
4. A list to the instructor of a student's medical requirements or necessary assistance to meet the needs of the student.	4.1 Secure a list of names and student information to be provided by the nurse. 4.2 Consult with the nurse and parents in order to consolidate student information on physical or emotional conditions. 4.3 Have a plan of action, in writing, regarding everyday and mergency procedures in meeting the needs of such students.

5. A curriculum of vocational competencies which are those of state approved occupational training programs in the six areas: agriculture, business and office occupations, marketing and distributive education, home economics and health related occupations trade and industrial educaton, and industrial arts.	5.1	Consult with the instructor(s) of the program(s) to secure occupational competencies for the student's curriculum.
	5.2	Adapt the competencies to meet the needs of the student.
	5.3	State the competencies on the student's IEP.
	5.4	Assess the progress of the student in achieving the competencies.
	5.5	If necessary, further analyze the task competencies.
6. A vocational advisory council which will include personnel from labor, business, and industry, females, minorities, and personnel who have worked with handicapped persons.	6.1	List the vocational areas of the programs which need representation from the council.
	6.2	Secure a list of names which are correlative to the needs of the council.
	6.3	Contact prospective council members.
	6.4	Secure a minimum of seven council members.
	6.5	Plan a schedule for a minimum of one annual council meeting.
	6.6	Select officers in the initial meeting.

	6.7	Maintain minutes of council business.
7. An integrated vocational student organization (VSO) for each vocational education program or for a cluster of vocational education programs.	7.1	Contact the program's vocational adviosry concil and the State Supervisor of Vocational Education for Exceptional Children in order to plan a format for the conduction of the VSO.
	7.2	Conduct meetings with the students in order to explain the purpose and functions of a vocational student organization.
	7.3	Have students vote for officers.
	7.4	Assist students to plan for community and school activities for the school year.
	7.5	Integrate leadership and occupational training activities in preparation for student participation in annual Special Needs conference.
	7.6	Maintain a copy of the minutes for each meeting of the VSO.

CONTENT STANDARDS
FOR
MAINSTREAMED VOCATIONAL EDUCATION PROGRAMS

PROGRAM OBJECTIVE	STANDARD OF STUDENT EXPECTATION
The program will provide instruction in:	The teacher will be expected to:
1. An individualized vocational education program as part of the student's total individualized education program.	1.1 Participate in meetings of individualized education program committees when appropriate.
	1.2 Help to develop the content of the IEP which will include goal(s), objectives, activities, special education and related services, extent of participation in the program, dates for initiating of services, and evaluative criteria and methods.
	1.3 Participate with the Department of Public Instruction in the annual evaluation of the IEP.
2. A vocational assessment prior to and continuing during the student's enrollment in the program.	2.1 Develop a scheldule, when applicable, for times of formal testing of the student.
	2.2 Maintain a record of continuous informal assessment.
	2.3 Assess the students cognitive, effective, and psychomotive domains.
	2.4 Provide a semi-annual and annual assessment of student's progress, strengths, and weaknessess to the IEP committee.
	2.5 Assist the career and occupational guidance and counseling of the student.

3. Activities and experiences which are related to the instruction and training of the program.	3.1	Adapt or adopt materials and experiences which will enable the student to successfully enroll and perform in the program.
	3.2	Provide related classroom instruction in the basic skills of communication, safety, social, science, mathematics, consumer education, independent living skills, and employment seeking skills.
	3.3	When appropriate, secure employment training for the student.
	3.4	Conduct follow-up studies of employed students and postschool employed students.
4. A list to the instructor of a student's medical requirements or necessary assistance to meet the needs of the student.	4.1	Secure list of names and student information to be provided by the nurse.
	4.2	Consult with the nurse and parents in order to consolidate student information on physical or emotional conditions.
	4.3	Have a plan of action, in writing, regarding everyday and emergency procedures in meeting the needs of such students.
5. Encouragement for special needs students to participate in integrated vocational student organizations (VSO).	5.1	Provide student with organizational outline.
	5.2	Highlight special interest activities.
	5.3	Provide motivation by relating peer accomplishments.